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THE
PHOTO-BEACON

A JOURNAL DEVOTED TO

PHOTOGRAPHY

IN ALL ITS PHASES.

VOLUME XII.

1900.

"LET THERE BE LIGHT."

THE PHOTO-BEACON COMPANY,
Tribune Building,
Chicago, Ill., U. S. A.

THE HENRY O. SHEPARD COMPANY
PRINTERS AND BINDERS,
212-214 MONROE STREET, CHICAGO

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Negative by James Patrick, IN THE SWEET SPRINGTIME. Edinburgh, Scotland.

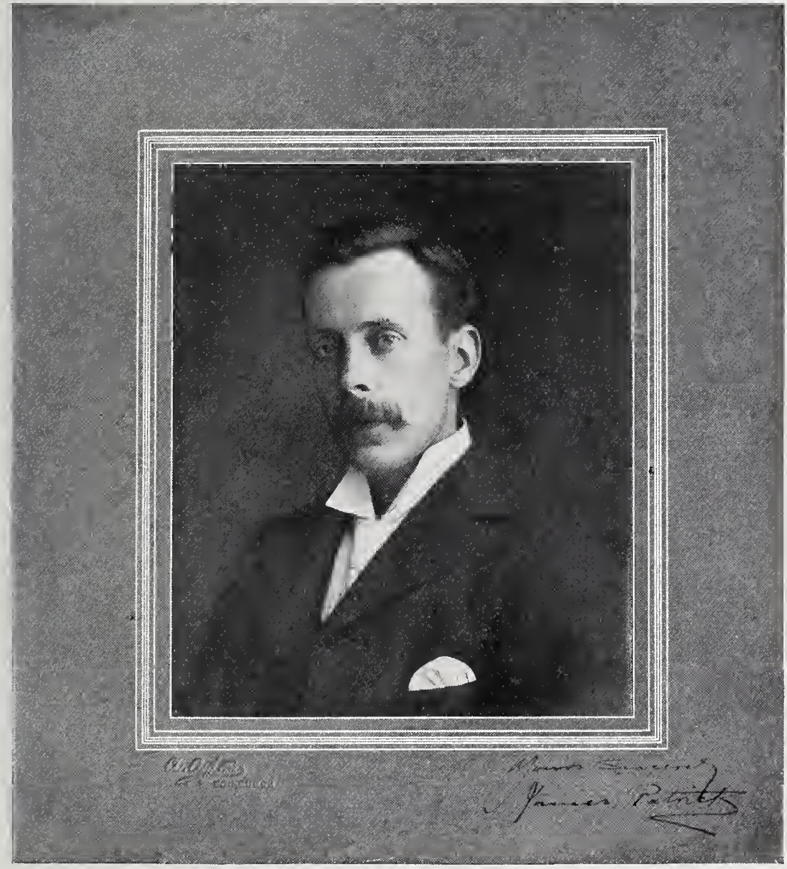
THE
PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. JANUARY, 1900. NO. 1.

JAMES PATRICK.

Some dozen years ago, when I was living in Scotland's capital, and "artistic" photography ran in my mind night and day, a bright idea suddenly flashed upon me, and that was to organize a club whose sole aim would be to help its members in that particular direction. I had acquaintanceship with a number of really good amateur and professional photographers, and was also fortunate enough to have the run of about half a dozen painters' studios, so I laid my little scheme before them, and ultimately we formed the "Viewfinders" Club, which was composed in equal



numbers of painters and photographers. We met once a month, and each member in his turn had to produce at least four examples of recent work for criticism by the others. I will never forget these meetings: how we sat around the poor victim, and between puffs of tobacco smoke told him very plainly what we thought of him and his work. This I will say: it was a capital training, and when I was in Edinburgh recently I met a number of the old members, and one and all referred with bright and glowing eyes to the good old times now gone.

One of these was "Jim" Patrick, as we all liked to call him. Although engaged in professional photography, he had never been associated in any way with a photographic society, but I had spotted the work he was doing, and willingly or unwillingly — I must frankly say modesty is his greatest failing — he had to become a member, and a splendid fellow he proved to be, once his diffidence began to wear off.

Though far removed from him during the past seven years, I never lost sight of him, and with pleasure I marked his steady upward progress. Every now and then I saw his name published, with the information that he had been the winner of another gold, silver or bronze medal, as the case might happen to be, and so when I once more found myself in "Auld Reekie," I invaded him in his home one evening, and insisted on seeing every one of his medaled pictures. I was simply charmed with them, both from a pictorial and from a personal standpoint, for all of them were made round about Swanston, a "sleepy hollow" lying under the shadow of the Pentland hills. It is a locality dear to lovers of the picturesque, but has other interests, for it was in this neighborhood that Robert Louis Stevenson spent his youthful days, wandering at his sweet will among fertile fields, or climbing to the higher pastoral solitudes.

Many of my readers will be tempted to exclaim, "No wonder he could make pictures! With such material, who could fail?" but one of Mr. Patrick's friends confessed to me that he had frequently visited the same region with his camera, and never yet had brought back anything that was worth comparing with the work of Mr. Patrick, and I may add he is no mean photographer. So that it is not merely a question of subject, but very much a matter of individual. Now about this individual and his method of working. Mr. Patrick first saw the light not so very many miles from where I did, but I should fancy a few years later, and I acknowledge being forty-one. His father was and is a professional photographer, having started in business as far back as 1853, and is well known as the maker of possibly the most successful portrait of Thomas Carlyle, which, by the way, was reproduced about a year ago in *Scribner's Magazine*, and was accompanied by a very interesting article by Mr. Patrick, Sr., giving his reminiscences of the great author. Before entering the photographic profession our subject underwent a very thorough art training. For four years he was a student in the Royal Institution, Edinburgh, and having then shown sufficient ability was permitted to attend the Royal Scottish Academy Life School, which he did for four years more. During that period and since, he exhibited in the Royal Scottish Academy and many other exhibitions. So when he turned to photography he brought to it a training for his future work that was simply ideal.

His photographic training he received from his father, his first and only employer, and for that branch he was certainly in good hands.

Mr. Patrick's methods of working certainly spell success, but I am afraid there are but few who would care to follow them — the more's the pity. He haunted Swanston until he simply became saturated with the glamour of the place, and had every topographical feature in his mind's eye. When the idea of a picture gets into his head, he pins a large sheet of white paper on his easel, and with charcoal sketches the main features of the scene. Then the sheep, cattle or horses, as the case may be, are sketched in, and the composition arranged down to the minutest detail.

Weeks are sometimes spent in this way, and then he arranges with the shepherd, if sheep be the accessory, or grieve, should it be cattle or horses, to be on the ground at a certain day and hour — even the particular condition of light is settled beforehand. After the camera is in position it is not unusual for hours to be spent in getting the animals into the correct position, and only when everything is just as he planned it is the exposure made. On one occasion it

Negative by James Patrick, Edinburgh, Scotland.

LIGHT AT EVENTIDE.

was only after days of patient labor that the predetermined combination was secured, but the result was a much-medaled picture.

As showing the thoroughness of Mr. Patrick's nature, I may state that in the case of the beautiful picture of the old lady, entitled "Eventide," in order to get sufficient light to give a little detail in the shadow-side of the figure, he had a mason knock a hole in the wall, and then sent a carpenter to put in a window.

Stevenson describes Swanston as "A little hamlet of some twenty cottages in the woody fold of a green hill." Mr. Patrick says of it, "Abundance of pictorial wealth is all around. At every turn the eye is delighted, and in whatever mood one may wander, sympathetic scenery presents itself. Nature is continually delighting the mind with its atmospheric glamour, and in every mood one sees new possibilities of picture-making. One could work here for a lifetime, and always find something new."

I need scarcely say a word about the pictures themselves. As examples of the artistic possibilities of photography, and by their association with that master of the English language, Robert Louis Stevenson, I think nothing more interesting has been presented to the readers of THE PHOTO-BEACON.

Mr. Patrick has achieved success; he certainly works for all he gets.

F. DUNDAS TODD.

[Elsewhere there is printed extracts from a paper read before the Edinburgh Photographic Society, in which Mr. Patrick describes very fully the ideas that influence him.]

THE Chicago Society of Amateur Photographers will hold a Photographic Salon in the Art Institute from April 5 to April 20, 1900. Some of the leading photographers both of this country and Europe have already expressed their intention to exhibit in this salon. That the high standard which has been set in the recent exhibitions in Philadelphia and Brooklyn will be maintained in Chicago is assured by the character of the jury of selection, which consists of Messrs. Alfred Stieglitz and Joseph T. Keiley, of New York; Clarence White, of Newark, Ohio; Ralph Clashron, Chicago, and Miss Eva L. Watson, of Philadelphia. The committee consists of Messrs. F. K. Laurence, chairman (95 State street, Chicago), W. B. Dyer, E. S. Bourke and Marshall Wait.

SIXTEENTH PICTURE COMPETITION.

This was quite an interesting competition, but a large number of competitors appeared to suppose that any picture made with the shutter was eligible. In the first round the judges placed in the eligible class only such prints as gave evidence that they must have been taken with the shutter, and from these the selections were made.

The following are the awards:

First prize.— William Baylis, Cedar Rapids, Iowa.

Second prize.— E. M. Miller, 3621 West Grand avenue, Des Moines, Iowa.

Third prize. — Dr. C. E. Dampier, Crookston, Minnesota.

PICTORIAL COMPETITIONS FOR 1900.

Competition No. 21.—River scenery. Closes January 31.

Competition No. 22.—Intensification. Closes February 28.

Competition No. 23.—Snow pictures. Closes March 31.

Competition No. 24.—Local intensification. Closes April 30.

Competition No. 25. — Pictures of children under seven years of age; not necessarily portraits. Closes May 31.

Competition No. 26. — Reduction. Closes June 30.

Competition No. 27. — Flower pictures. Closes July 31.

Competition No. 28.— Local reduction. Closes August 31.

Competition No. 29.—Genre pictures, or pictures that tell a story. Closes September 30.

Competition No. 30.—Reducing excessive contrasts in a negative. Closes October 31.

Competition No. 31. — Landscapes. Closes November 30.

Competition No. 32.—Ray-filter pictures. Closes December 31.

RULES.

1. In the purely pictorial competitions, Nos. 21, 23, 25, 27, 29 and 31, there is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing

else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given, also the printing process.

2. In the technical competitions, there should be sent, first, a print from the negative before work is begun upon it; second, another print showing the effect of the operations. Along with these should be sent a very brief description of the course of procedure.

NOTE.—Methods of performing the various operations are to be found fully described in Part II of "The Reference Book of Practical Photography." In No. 32, ray-filter competition, send one print made with ordinary plate, and one on color-sensitive plate with color screen.

3. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

PRIZES.

First.—Books to the value of $5.
Second.—Books to the value of $2.50.
Third.—Books to the value of $1.
To be selected from our catalogue.

LITERARY COMPETITION NO. 8.

After very serious consideration the judges made the following awards:

First Prize—Irvin H. Nelson, 1027 College avenue, Racine, Wisconsin.

Second Prize—Vincent J. Rawlinson, 509 Willow avenue, Ithaca, New York.

Third Prize—John C. Mahin, Riverside, California.

LITERARY COMPETITION NO. 9.

The awards were made as follows:

First Prize—Mrs. Nellie M. C. Knappen, 606½ East Twenty-seventh street, Minneapolis.

Second Prize—W. Marshall, 24 South Porter street, Elgin, Illinois.

Third Prize—Miss M. A. Daniels, Box 255, Chautauqua, New York.

CRITICISM OF OUR NEW COVER.

For the brightest criticism of our new cover we offer a prize of $5 in cash. Hard knocks enjoyed just as much as compliments. Competition closes January 31, 1900.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

RULES.

1. Write on one side of the paper only.

2. Be brief, sending less than one thousand words, if possible.

3. Never mind style—use the smallest words you know.

4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.

5. Write your name and address at the end of the article.

6. Mark the envelope "Literary Competition."

7. Preference given to practical articles, that is, those that tell "how to do things."

EDITORIAL TABLE.

One of the cleverest and at the same time simplest little things we have seen for a long time is Hutching's Handy Plate-Box Opener, handed us recently by the Hammer Dry Plate Company, St. Louis.

For the first time for some years we had a visit from the *British Journal of Photography Almanack*, which has apparently grown much more corpulent in the period. It is full of practical articles and will provide material for both theory and practice.

The "American Annual of Photography" reaches our hands just as we are closing forms for the press, preventing us giving it the careful overhaul we would prefer before making comments on it. It seems to be up to the usual standard, and will no doubt receive a warm welcome.

From the Eastman Kodak Company we have received a package of flash sheets for trial at Christmas time. This is written two days before that date, so they are still intact. The price, we notice, has been reduced from 40 cents to 25 cents a package. They are certainly very convenient.

SOME PHOTOGRAPHIC CARPENTRY.

We have three cameras here at our house, and having them we naturally try and make some use of them, but with what success I would not like to say. Still we get, now and then, a negative that pleases us fairly well. At all events, we enjoy the trying. Now the "root of all evil" is a very scarce article with us, and we find we must make a few of our "supplies," or do without. Perhaps it may interest a few of your many readers, especially those with short pocketbooks, to know of and how we made one or two of our makeshifts. Makeshift seems hardly a fair name either, as we have found that our home creations have served us very well indeed, besides giving us a little pleasant work on a rainy day, or any other old day, for that matter. Let me begin, then, with a negative rack.

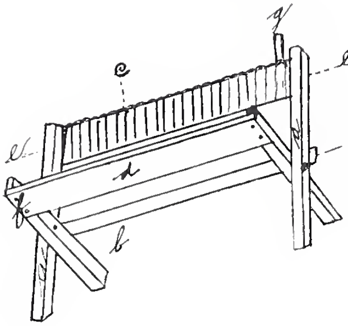


FIG. 1.

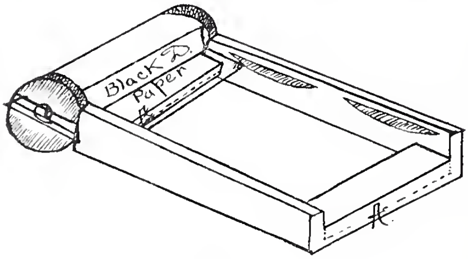


FIG. 2.

If some amateurs think negative racks are too cheap to fool with, all right, buy them; but it is just possible there may be others who don't mind the fooling and prefer buying a dozen plates or so with the rack money. You will need two pieces of pine 8 inches long by 1 inch wide and ¼ inch thick (Fig. 1, *a a*); two pieces same width and thickness and 6 inches long (*b b*); one piece 10 by 2 by $\frac{3}{16}$ inches (*c*); another piece like this, but ½ inch shorter (*d*). You will also want two small brass screws, a dozen or so small nails (those taken from a cigar box are just the thing) and a piece of corrugated pasteboard, or mailing board, as it is sometimes called; any druggist will give you this, as the cost is trifling. Now take one of the 8-inch and one of the 6-inch pieces; lay them together, the 8-inch piece on top and the ends even, and fasten them together with a screw 3½ inches from the end. Do likewise with the other two pieces of the same lengths. Now, with good paste or glue, attach the corrugated pasteboard to the two flat pieces, 10 and 9½ inches long, cutting the pasteboard the same length and width. Nail the 10-inch piece to the two pieces joined with screws, nailing at the top of each 8-inch piece (*e e*). Put on the 9½-inch strip in the same way, at the top of the 6-inch pieces (*f f*). Now gather up all of the spent matches you can. You will need 75 or 80 cut all the same length — 2 inches. Push a match into each corrugation (*g*). This is to hold the pasteboard firmly; otherwise the water from the wet plates would soon flatten it. Tack a small strip from one of the 9-inch pieces to the other, about ½ inch above the screws (*h*). Give all a coat of varnish.

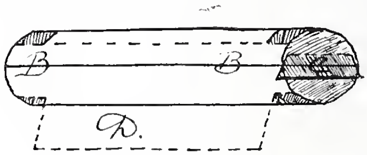


FIG. 3.

Not having the $2 to $5 to spare for a combination printing frame, and desiring to try our hand on a 4 by 20-inch photograph, and finding when printed separately from each negative and joined together on the card, the finished picture did not look as well as work done with a combination frame, we decided to make one ourselves. We were just one hour in the making, and this is how we made it: Take a printing frame, say a 4 by 5, as we did, and cut down the ends to within just the thickness of a glass plate (Fig. 2, A A). Now, hunt up a pasteboard mailing tube about two inches in diameter. Cut two pieces, each five inches long, or the length of the width of your printing frame. Cut each tube, lengthwise, in halves (Fig. 3, B B). Paste a piece of black cloth over the cut tube to make a hinge, and so join the two halves together. Close the tube and paste a piece of black paper over each end. When dry, clip the paper through the center, so you can open and close the tube. As these tubes are to hold the printing paper, they must be made as nearly light-tight as possible. Also, paste a piece of black paper on the upper half of each end of the tube to cover the opening (Figs. 2 and 3, C C). Cut a strip of paper the length of the tube and about two inches wide. Paste the paper (black, of course), on the upper half and allow it to extend over the printing frame, say an inch or two (Figs. 2 and 3, D D). Make the other tube the same way. Now tack or glue the tubes to each end of the frame and your combination frame is completed. See Fig. 4.

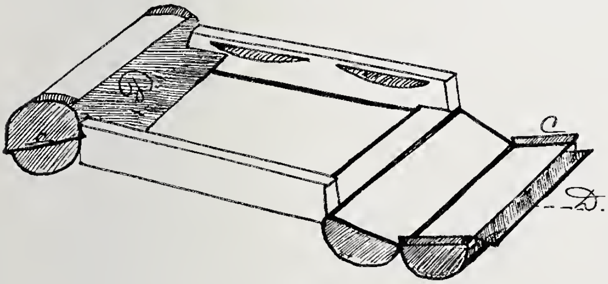


Fig. 4.

We have found our home-made frame answers every purpose and protects the paper while printing perfectly.

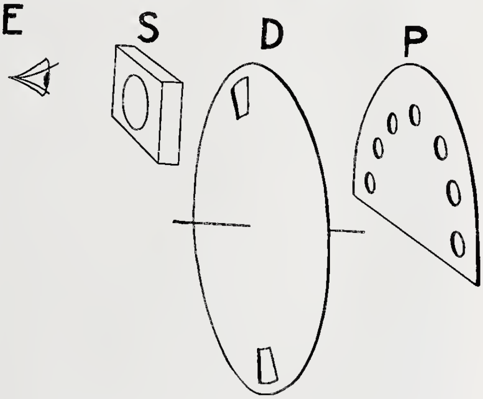
I might tell your readers of several other "fixings" made at home, among them a washing box, trays, graduates, a fixing box and one or two other things, but I fear I have already taken up too much space.

Miss L. L. Coolidge,
Troy, Ohio.

[Come again, please.— Ed.]

A SHUTTER SPEED TESTER.

Essentially the apparatus consists of two parts. First, we have a semi-circular disk of metal or other opaque substance. Parallel to its circumference we have a series of holes at equal distances apart (see P in accompanying diagrammatic sketch. This is a fixed part. The other part consists of a circular piece of thin metal, D. This is so placed that its plane is parallel to and about half an inch away from — i. e., nearer the spectator than — the plate P. The centers of P and D both lie in the axis of rotation of D. By means of a suitable train of clockwork wheels and friction brake the disk can be caused to make one, two, etc., revolutions per second. In D are cut four holes or slits (two are only shown in the diagram) at equal distances apart, and so placed that as the disk rotates the slits in D pass just behind the holes in P. To test a shutter we proceed thus: The box (open at each end) and containing P and D, etc., is placed on a table opposite a window, P being toward the source of light. The disk D is set rotating at a known speed; the experimentalist, holding the shutter S between his eye E, and the disk D, discharges the shutter, and observes how many holes are uncovered by the slit in D as it rotates. From this observation he can (approximately) determine the time-value of the shutter. For example, suppose that the semi-circular piece P has eighteen holes, i. e., nine for each right angle, so that they are 10



degrees apart; and that the observer saw three of these holes when he discharged the shutter. Therefore, the slit D must have moved through 30 degrees during that time. Also, suppose the disk D was set to make exactly two revolutions per second. The argument runs thus:

The slit in P goes twice round in one second, i. e., travels eight right angles or (8 × 90) 720 degrees in one second. Hence it travels one degree in $\frac{1}{720}$ second. But the shutter was open long enough to set three holes, i. e., move over 30 degrees. Then the time value of shutter is $\frac{30}{712}$, i. e., $\frac{1}{24}$ second.

WORKING OUT AN IDEA.

> "The melancholy days are come,
> The saddest of the year,
> Of wailing winds, and naked woods,
> And meadows brown and sere."

The above lines suggest an effect that one can find in landscapes only at this time of the year. That effect is decidedly melancholy; and as the melancholy and sad are much sought after by painters and landscape photographers, I suppose the poem has suggested many photographs; but as at present I do not remember any, the idea is original so far as I am concerned.

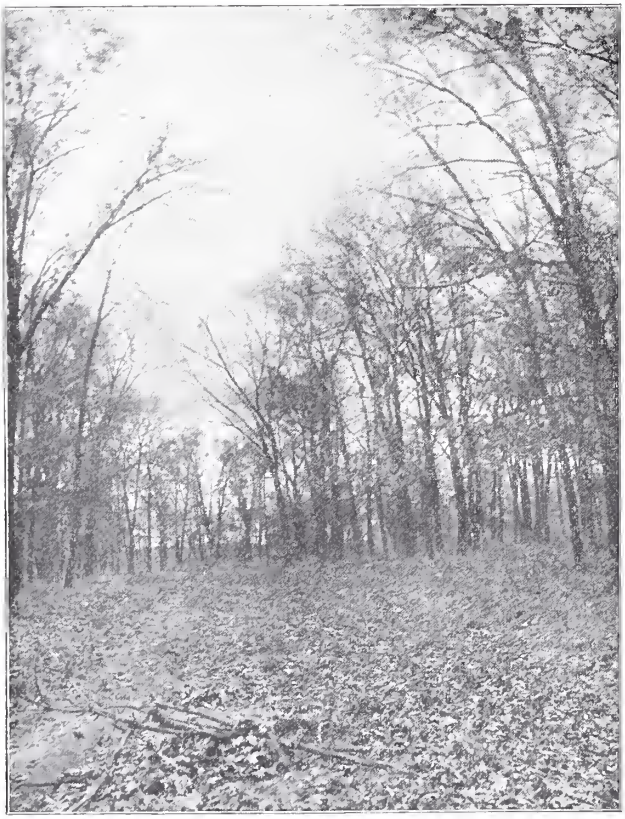
Now that Nature's aspect is suitable for my subject, what choice shall I make as to selection, lighting and exposure? To produce the effect of sadness and melancholy a landscape that has something of gloom in it is necessary; therefore I will choose a place in the deep woods. Bright contrasts in light and shade will hardly be desirable, such as bright sunlight would give; but better the darkening effect of a cloudy day. There should be an abundance of fallen leaves on the ground, and sufficient sky, if possible, to faintly show the cloud effects.

Having thus in mind the effect I wanted, and my best judgment as to the kind of a landscape to give it, I awaited a suitable day. Such a day was November 1, 1899. So with camera outfit I took an afternoon stroll through the deepest woods I knew of, and after examining many spots, selected the one I liked best.

In order to render the colors and cloud effects to the best advantage I used a ray filtergraph and Cramer instantaneous isochromatic plate, and gave an exposure of four seconds at 2 o'clock.

I printed on portrait Velox, holding the clouds much nearer the lamp flame than the ground, and developed in a hydro-eiko developer, which works slowly, giving easy control, and very black tones.

E. M. MILLER.



Negative by E. M. Miller.

THE PHOTO-BEACON EXPOSURE TABLES are good for snow scenes. Price, 25 cents.

MY GREATEST PHOTOGRAPHIC MISTAKE AND ITS CONSEQUENCES.

Whether a mistake be great or small, should be judged from its effects. If it only teaches the maker not to repeat it, then it is trivial. Should it cause far-reaching changes in the life or thought of the one making it, or of others, then the mistake is a great one. Perhaps at the time of its occurrence it may seem of no importance, but when one sees the consequences he realizes its magnitude. Of this latter class was a mistake of mine, made when I tried a new formula for intensifying, and, in some unexplained way, managed to spoil the negative. A very trifling matter is probably your mental comment. But wait and see. I have spoiled many a negative before and since, but never one which led up to such a complete change in my methods of work and my ways of thinking. To understand all this change you must have some idea of some of my experiences before and after making the mistake.

Doctor B—— was (and is) the oldest amateur of my acquaintance, both in years and experience. He has always maintained his position at the front, where he could give us all pointers on making pictures. His fine collection, his evident enjoyment in making and talking over them, and the very evident ease with which he obtained the subjects, led me to take up photography as a pastime. I bought a camera and outfit, and went to work, but, some way, could not secure the kind of pictures Doctor B—— seemed to find so easily. I haunted the scenes I saw pictured in the Doctor's collection, snapped my camera at everything, animate and inanimate, which could possibly make that great picture which was to be as good as his. My friends to whom I

Negative by William Baylis, Cedar Rapids, Iowa.

THE RACE.

(First Prize.)

Negative by James Patrick. "A stilly hamlet home that vies,
With any earthly paradise." Awarded gold medal, 1899.

showed the results of these long tramps would always praise my work with such phrases as, "Such fine focus," "Such elegant tones," "Such perfect definitions," etc., and then *invariably and always* finish with something like, "but you should see one which Doctor B—— has," etc. Always Doctor B——. Week after week this kind of thing continued — always Doctor B——.

My desperation finally drove me to call on the Doctor and ask him questions I am now ashamed of, but which he answered gently and fully. (I have often wondered what he thought of me then.) Out of the evening's talk I sifted the three most unimportant things he said — namely, the brand of plate, the developer and paper he used. I returned home happy as a king — I had found the Doctor's secret. Now I could easily make that ideal picture and silence that exasperating remark, "but some of Doctor B——'s." I bought some of the brand of plates he used, had some developer prepared from his formula, then went to a choice bit of landscape a mile or so from home, and proceeded to execute my great design. I developed very carefully, and to my surprise, the result was inferior to some of my previous work. I could not understand it. Later experience tells me it was because I was not acquainted with the plate nor developer, but at that time I felt as though I had run into a stone wall and could go no further. Discouraged is a weak word for my mental condition. Like many a one before me, I decided to improve the picture by intensifying it — hoping to make something out of nothing. In doing this, as I said in the beginning, I ruined it. Here, then, is the mistake; now for the consequences.

I was determined to have a picture of that particular place, and in order to get it and get back in time, started out early next morning. This trip was nearly a run, the exposure was a hurried one, and the sun only a few hours high. At the first opportunity I developed the plate, and, to my utter amazement, found a splendid negative. I showed a print to my most critical friend, who said at once: "Why, this looks just like Dr. B——'s work." At last my fondest hopes were realized. I had equaled Dr. B——'s beautiful pictures. This was indeed happiness; yet, come to think of it, I had used one of my old plates and my old developer. How could this be? It was not in the plate after all. Where was it then? These mental queries set me thinking in a new direction. I procured a print from the spoiled negative and placed it beside the "great" one. They looked just alike; the stream in the foreground, the trees on the hill beyond, the old rail fence running its zigzag course up the steep until lost in the forest, were the same in both pictures. A closer look and a *something* asserted itself. They were not alike at all. What made it? After long study I decided it lay in the fact that I made my first exposure with the sun at my back (where I had always heard was the correct place for it), and when I made the last exposure the sun was far to my right, so I had taken the *shadow side* as well as the *light side* of each object. Here, then, was a discovery. Light has something of power in producing pictures which is different from its power of affecting a plate. But everything was as yet dim, intangible, undefined, excepting this one fact, that there is something deeper, better, greater in photography than the brand of plates, developer, paper, lenses, toners.

A copy of "First Step in Photography" attracted my attention about this time. A careful study of its pages started me in the right direction. I had begun to understand what it was I was trying to learn. "Second Step," "Artistic Lighting," soon followed the little one into my library. More pretentious works fascinated me, until the study of lighting, composition, and artistic photography generally, became my greatest pleasure. I finally discovered the reason Doctor B —— found pictures every one thought so fine. He understood what made a good picture, and how to find it. I finally was able to understand how to utilize light and shadow in more or less correct composition, and secure pictures myself and friends loved to linger over and enjoy. In short, I began to make *pictures* instead of mere photographs.

Had it not been for the mistake which spoiled that particular negative, and sent

Negative by James Patrick, Edinburgh, Scotland.

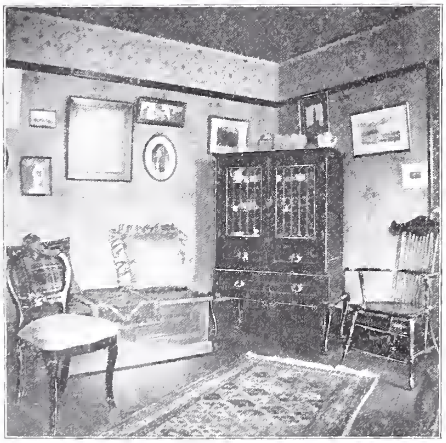
THE END OF THE DAY.

me so early in the morning to replace it, I should have been, at best, but a "button-pusher" today, if not completely disgusted with the whole business, and my camera thrown into the darkest corner of an unused closet. This is why I call this my greatest mistake. If this experience will help some dissatisfied amateur to see and know what is lacking in his work, and start him to thinking in the right line, then I have not written in vain. And each one who starts into this fascinating study of the art side of photography, from reading this, will but make my mistake the greater, for its effects will be that much more far-reaching and important. F. E. W.

PHOTOGRAPHING INTERIORS.

FIRST-PRIZE ARTICLE.

One who has never tried to photograph the inside of a house can with difficulty conceive the many obstacles between the selection of a point of view and the mounted print. Fortunately for the cause, the amateur is dauntless, and troubles that come "in a heap" may be met and overcome, one at a time.



Neg. by Mrs. N. M. C. Knappen, Minneapolis.
Fig. 1.

First comes the camera to be used. Those whom this article is designed to help probably possess but one. Cheaper cameras, with their short focus and wide-angle lenses, are better suited to interior than any other kind of work, as they take in so much, a necessity where one works in so cramped a space as the average house. If the camera is supplied with a ground glass, the diaphragms *f* 32 will give about the right degree of sharpness in the detail, especially since F 64 prolongs the exposure so far. If the room is too dark to focus easily, use the lens at full aperture for that purpose, and then stop down. Place the camera at the height of the eyes, from which point it is usual to view a room. If the camera be without ground glass, then use the finder. Illustration No. 1 shows a really good picture taken with a $5 (Vive) camera, by one absolutely ignorant of the subject.

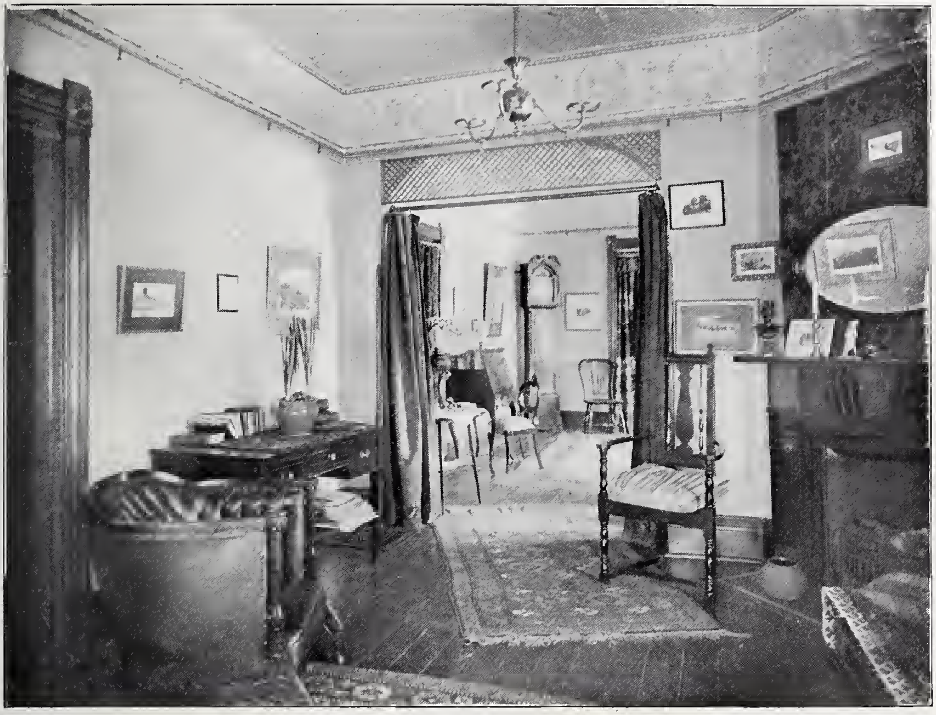
The tripod or other firm support should be as near the wall or corner of the room as possible, in order to obtain the greatest depth, and to avoid the appearance in the picture of wall space, with a little ceiling and floor attached.

Let us next consider the lighting. This should be from the side, as in portraiture, to give roundness to articles in the room, with a little from behind the camera to give more even illumination. All the light from behind gives a flat picture. It is best for beginners to avoid taking toward a window. When, however, it is unavoidable, take a very long exposure with the curtains down, and then raise them, and give one second exposure.

Near the middle of the day is the best time to take interiors, as then the sun is too high to shine directly into the room. A patch of sunlight on the floor looks like snow in the room. When the snow is on the ground, the light is reflected up into the upper part of the room, and the whole room is more evenly lighted. (See illustration No. 2.)

An interior is much more attractive when other rooms open off from the main one. A partly drawn portière, or open door with a glimpse of furnishings beyond, gives a pleasing suggestion of space.

Next let us consider the arrangement of the furniture. Leave things as nearly as possible as they ordinarily are,



Negative by Mrs. N. M. C. Knappen, FIG. 2. Minneapolis, Minn.

except that very large pieces should not be directly in front and near to the camera. Their size would be exaggerated, and they would dwarf and hide the other furnishings. Do not drag into view too evidently arranged sofa pillows, mandolins and banjos. Leave something to the imagination. But an open book on table or couch, a bit of sewing by the work-basket, music on the piano-rack, or simply arranged flowers on the mantel, give to the room an appearance of being occupied.

Next, stand with the eyes as nearly as possible where the lens is, and take a careful survey of the pictures. If any reflect light, adjust them by stuffing something behind until they are at such an angle as to show the picture clearly through the glass. (Illustration No. 1 shows ignorance of this point.) Mirrors and glass doors to cases require the same attention.

If all is ready, warn away all members of the family, make sure that the camera is perfectly level, expose the plate, and sit down by the camera to guard against accidents.

The length of exposure varies with the light, the size of the diaphragm and the plate. If a non-halation plate is used, the time is doubled. With diaphragm *f* 32, ordinary rapid plate, and a well-lighted room, give fifteen minutes. If the picture is taken toward the light, one hour will be required. Exposures vary between and beyond these limits, as the time of day and year change, and atmosphere differs.

The development of the plate should be slow, with weak developer, and potassium bromide to hold back the high lights. This will give a thin, even negative, full of detail.

The smooth papers, so detrimental to artistic effect in landscape and portraiture, are permissible in printing interiors, as detail is then desirable. The tone may be either black or brown, as pleases the worker.

The second print gives the author's idea of a good interior, taken on a non-halation plate, in December, at midday, giving forty minutes exposure with *f* 32.

(MRS.) NELLIE M. C. KNAPPEN,
606½ East Twenty-seventh street,
Minneapolis, Minn.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F.R.P.S.

Author of "Practical Enlarging," "Elementary Photography," "Lantern Slide Manual," "Photographic Lenses," Etc.

CHAPTER I.

PRELIMINARY CONSIDERATIONS, AND A FEW SUGGESTIONS ON EQUIPMENT, THE LENS, ENLARGING *versus* DIRECT WORK, ETC.

Perhaps a few words to my brother photographers in America, by way of introducing myself and my object in writing this series of articles on "Artistic Landscape Photography," may not be without value.

Photography has made, during the last few years, both in Europe and in America, very great advances from the purely artistic or picture-making point of view, and many who practice photography, and who possess, though untrained, the true artistic instinct, are desirous of learning how their technical skill in the use of the camera and lens may be directed to the production of artistic work. My chief object in penning these articles will be to assist them in fulfilling their desire.

Let me, however, at the outset, disavow any intention of writing a treatise on art. Many handbooks on that subject are already in existence, in which it has been treated by hands far abler than my own. I shall, of course, refer to those general principles, the so-called "rules of composition," in so far as they can be applied to the making of pictures by means of photography, and I shall endeavor, as far as possible, to illustrate their application by reproductions from actual photographs.

Negative by James Patrick, Edinburgh, Scotland.

THE "ROARING SHEPHERD'S" COTTAGE, SWANSTON.

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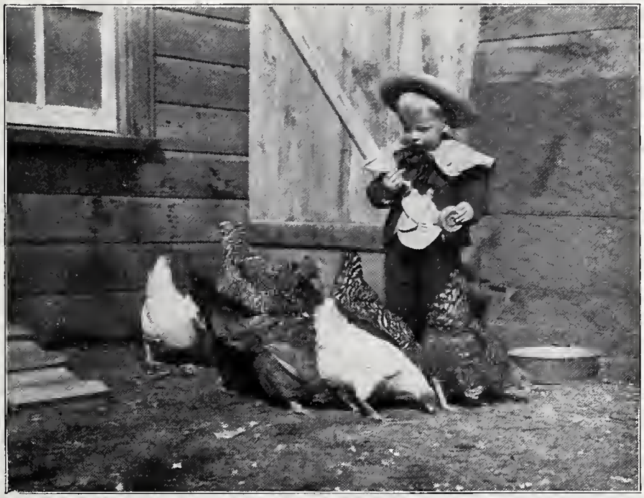
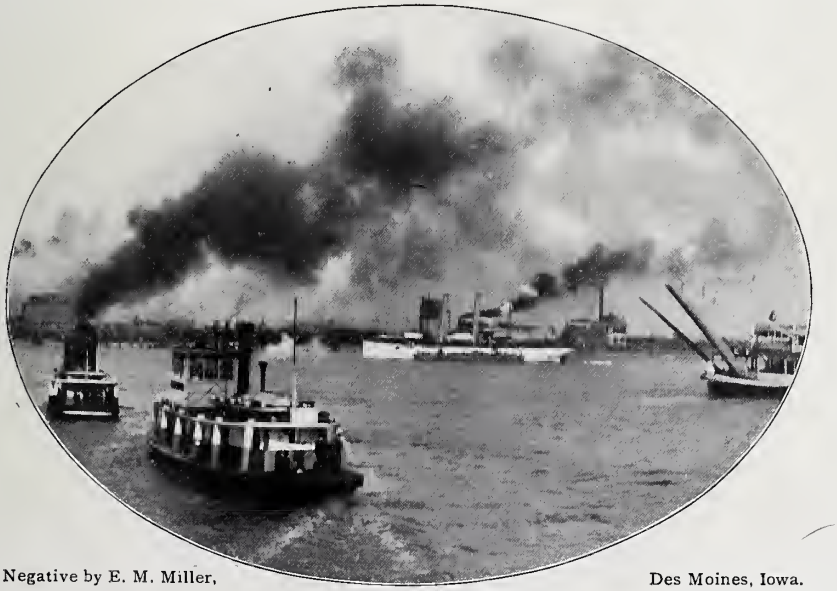
* Copyright, 1900, by F. Dundas Todd.

It will be well, perhaps, at the very outset, for the reader to realize the actual position of photography as a means of pictorial expression. The photographer may say to himself: "This scene is very beautiful; it appeals strongly to my artistic instincts; I will photograph it, because such a photograph must necessarily be pictorial." But it by no means follows that that photograph when taken will be a work of art. The beauty or the picturesqueness of the scene may have produced in the photographer's mind a general impression of those qualities, to the entire exclusion of many incongru-



Negative by Dr. Dampier, Crookston, Minn.

THE LAST KERNEL.
(Second Prize.)



Negative by E. M. Miller, Des Moines, Iowa.

ON THE MISSISSIPPI.
(Third Prize.)

ous details which the unerring fidelity of the lens renders in the photograph with an all too fatal prominence.

One of the first things, therefore, that the reader must endeavor to appreciate is that Nature is not necessarily art, and that if we would be artist photographers we must do something more than produce literal transcripts of Nature. We learn, likewise, that the lens lacks the discriminating power of the painter's brush, and gives equal prominence alike to minor details as to the principal object in the picture.

With all its limitations, however, photography, fortunately, is amenable to certain methods of control; were it otherwise artistic photography would be an impossibility, and these notes could not be written. It will be my endeavor to instruct the novice in the various methods which are open to him by which he may modify the natural tendency of the lens to give a too literal, or matter-of-fact, or commonplace rendering of the subject portrayed.

But in order that the reader may be in a position to follow the advice which will hereafter be given, it is necessary that he should be in possession of suitable apparatus, and, therefore, as a preliminary to dealing with the theoretical and practical aspect of the subject, it will be useful to give the question of apparatus some consideration.

The photographer who would aspire to the production of pictorial photographs must be properly equipped for his work. If, for example, he attempts to do everything with one lens he will find himself tremendously handicapped, and at times compelled to pass by subjects which, had he possessed a lens of suitable focus, might have produced charming results. What painter, may I ask, would attempt to paint a picture of any pretensions, using for the purpose only one brush? But how much more fettered must be the photographer who with one lens attempts to portray every scene which appeals to his fancy or imagination! Much of the adverse criticism which has been bestowed upon what has been styled "the untruthfulness of photography" is traceable to this cause, and is not the result of any inherent shortcoming of the process, but is solely the fault of the practitioner.

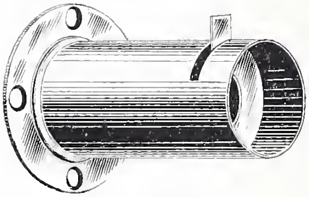


FIG. 1.

Considering how enormously the photographer is fettered, in comparison with the painter, in regard to choice of position and general arrangement of the subject alone, we hold that no photographer, who wishes to be even moderately independent of his tools, can consider himself properly equipped for his work with less than three lenses. Happily the question of expense need not arise, because the single achromatic lens, which is the type I strongly recommend, is not only the very best that can be used, but is also the cheapest. Of these, three should be selected, their focal lengths being approximately one and a quarter times the length of the base line of the plate, one and a half times its length, and twice the length. These should be set in cells which interchange in one mount; and as they will have to be frequently changed, a bayonet joint will be found much more convenient in use than a screw. In Fig. 1 I have given a sketch of a convenient type of mount consisting simply of a tube fitted with Waterhouse or iris diaphragms, which any working optician would make for a small sum; there is not the least practical necessity to go to a great deal of expense.

Single lenses, as issued by the opticians, usually work with an aperture of about *f* 16, or, in some cases, *f* 11, but we suggest that the maximum aperture should be increased to *f* 8. It will be impossible to obtain what the optician would call "sharp definition" with this aperture, because of the defect known as spherical aberration. This, however, will be in many cases a positive advantage because it will enable us to obtain that softness of outline which is often very conducive to pictorial effect. Of the use of the lens, and the influence of definition on the picture, I shall speak in another chapter.

Time need not be occupied in discussing the remainder of the apparatus. The camera must be rigid even when fully extended, and, as long-focus lenses will be used, it must be capable of considerable extension. There is no necessity for a great number of adjustments ; a simple sliding motion is, I think, quite as convenient for focusing as a rack and pinion or winch screw. The front should have a considerable range of rise and fall, and a reversing back and double swing-back are almost essential, the latter not for the correction of faulty lines, for we are not considering architectural work, but to assist the lens in bringing the foreground into good focus without the necessity of stopping it down. Such a camera as I use in my own practice I have sketched in Fig. 2, and those who may be about to set themselves up with a complete outfit can not do better than have one constructed on these lines.

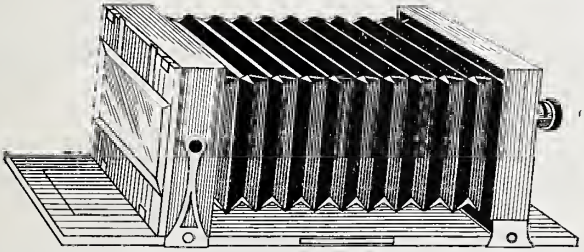


Fig. 2.

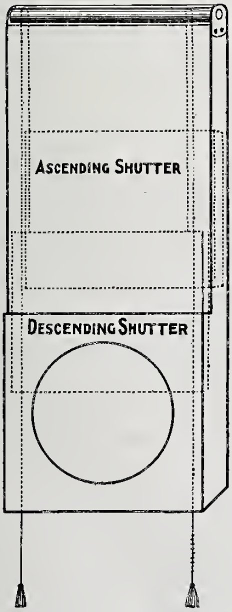


Fig. 3.

The shutter is a most important item—I rarely use a lens cap for making an exposure, preferring to use a shutter of the type sketched in Fig. 3. I do not know whether it is obtainable in America. Here in England it is sold under the maker's name as Place's shutter. A cord on being pulled draws up an ebonite shutter, and by continuing the motion a second shutter comes down and completes the exposure. With it any duration of exposure can be given up to about the $\frac{1}{10}$ of a second, beyond which speed the pictorial worker will seldom have occasion to go. Its great advantage lies in the fact that a graduated exposure can be given, and the foreground getting more exposure than the sky, both clouds and landscape can often, when the conditions appear to be suitable, be secured upon the same plate. I shall have more to say later upon this point when I come to deal with the important question of clouds and skies, it being with many a debatable question whether the sky should be on the same plate as the landscape, or printed in from a separate negative.

The question of size is one upon which many readers will look for a word of advice. It is, however, very largely a matter which each individual worker must decide for himself. Size has nothing to do with pictorial merit, but at the same time it must be remembered that when we meet with a small work of great excellence we feel a kind of instinctive regret that it was not of more imposing dimensions. There can be no doubt, other things being equal, that size adds to the importance of any photograph, and our advice would be that as large a plate as personal convenience and the depth of one's pocket will allow should be worked.

The alternative method of producing a large photograph, namely, by enlarging the small original, naturally arises and claims consideration. In regard to the ultimate quality of the work, the results are quite equal, both technically and pictorially, to those produced from large negatives taken direct; though perhaps a higher degree of technical skill is demanded, the trouble involved may be greater.

On the other hand, those who adopt this method of working have larger opportunities than the users of large cameras, for a small, light camera may be made one's constant companion on rambles in either town or country, and its possessor, therefore, is always prepared should a subject suddenly present itself.

The only danger to which the user of a small camera is exposed is the temptation to make too many exposures, upon subjects which may not be worthy of his attention. The small size and trifling cost of the plates also tends to make one less careful than would be the case in dealing with plates of large dimensions. The same degree of skill and the same degree of care must be bestowed on the humble quarter plate, or 4 by 5, as would be devoted to the lordly 10 by 12 or 12 by 15.

Negative by James Patrick, Edinburgh, Scotland.

THE FAGOT GATHERER.

Now that this chapter is written, I find I have dealt at greater length with these preliminary matters than I at first intended, but recollecting that the beginner, as well as the more advanced worker, will read these articles, I am hopeful that neither space will have been wasted nor time thrown away.

MATTERS PERTAINING TO THE ART SIDE OF PHOTOGRAPHY.

BY MR. JAMES PATRICK.

I ask you to bear in mind that I do not presume to pose before you as an art teacher. Art indeed in any true sense of the word can hardly be taught, being the expression of a feeling which is the outcome of an inborn sympathy with the grand and beautiful in nature; and if a man be destitute of the faculty for such sympathy, the attempt to make him feel it, much more express it, would be as futile as would be that to make a blind man see and reproduce in a word-picture the beauty of a sunset.

But while no man can work successfully against natural incapacity, or be taught to produce a work of art solely by means of books or papers, at the same time if the feelings for nature exist, even in germ, it may be developed to some extent, and in this direction books and papers may be of some little use.

I would say, in the first place, that it should be our supreme endeavor to cultivate this in our observation and study of scenery rather than a mere topographical acquaintance with the commonplace features of the landscape, and to make a strenuous although humble effort to portray something more than the mere external appearance, so that we may reproduce in our work the impressions which Nature has conveyed to us. And, with a view to getting these impressions chastened and strengthened, we should

Negative by James Patrick, Edinburgh, Scotland.

HOMEWARD.

walk abroad in "all sorts and conditions" of weather, and study Nature in her ever-changing phases, pictorial or otherwise.

I can not help thinking that we do not study half enough those wonderful atmospheric effects which are so characteristic of our climate.

Nature is continually delighting the eye with its atmospheric glamour, and may be portrayed in many moods — in storm or calm, or when the clouds are scurrying across the sky and casting shadows and producing wonderful effects on the hillsides. Now this variety of aspect can not be obtained by going out only in fine weather and when the atmosphere is clear. Views taken under such simple conditions, in the hands of a good technical worker, result in many admirable transcripts of the scene which he saw at that particular period of time, but this technical perfection — clean manipulation and prosaic details — do not go far in the production of a work of art. No; photography has higher aims. We still require such indispensable qualities as breadth, harmony, unity and atmosphere.

An effect of haze or mist in the distance is a thing to be prized and made the most of. Therefore I can not help thinking it is a mistake to try to penetrate it by yellow screens and isochromatic plates. By so doing you lose, to a very great extent, the sentiment and picturesqueness of the subject.

Chiaroscuro, or light and shade, is of paramount importance in the production of works of art. Without it, in fact, no pictorial work can be accomplished. We have not, indeed, the same liberties that the painter has in the matter of altering the light and shade to suit our subject. There is thus the greater necessity for studying carefully those effects which will produce the most pictorial results. We still require such indispensable qualities as breadth, harmony, unity and atmosphere; and it may be safely said that all these qualities are embraced in the word chiaroscuro. There is (or rather should be) in every picture a point of superiority; it may be a point of light or a point of dark, but in either case it should serve as the keynote to the whole picture, and prevent that spottiness and confusion to the eye resulting from its being attracted by numerous parts of equal importance.

The photographer, like his big brother of the brush, can pitch his keynote on any scale, but pitch it as high or as low as he pleases, it can never have the same range of tones as Nature. Her highest light is the sun; ours is white paper. Therefore I think we get more true to nature when we pitch our keynote low. And painters of the present day seem to be recognizing this more and more. One can not walk round an exhibition of paintings without seeing the truth of this statement.

The photographer, in many instances, has, by choice of position, the opportunity of increasing this effect so as to make the most of it. The introduction, for instance, of a figure or figures (dark or light) into the weak part of a picture will at once give tone or value to the whole landscape.

I send an illustration of this picture, "The Harrowing." Here you have a fair illustration of what I mean. The keynote that gives tone or value to the whole landscape lies in the introduction of the last two teams of horses in shadow.

Now the time of day was carefully selected in photographing this subject. The sun was not altogether dead in the eye of the lens, but nearly so. Have you ever photographed with the sun dead in front of the lens? If not, I would strongly commend it to any of you striving after pictorial effect. There is a breadth and suggestiveness got by this mode of lighting which is altogether awanting with pictures taken in the usual orthodox fashion; it seems to enable us to render true tonality and atmospheric effects.

The simplification of the means of taking photographs by such a camera has no doubt increased the army of workers, and in the ranks there are bound to be men endowed with artistic instinct who, after shooting away with the hand camera for a time, go in for something more substantial, and in this respect the hand camera will have been a gain to the user.

For securing the natural groupings of figures, and for recording many little glimpses of travel, it is simply indispensable. It is the abuse of such a camera that has to be deprecated. In our exhibition here we have some splendid examples of hand-camera work. These are evidently produced by men who know exactly the limitations of such a camera, and knowing that their scope was restricted, kept within its bounds, and produced some wonderful little pictures. I can not help thinking that it is only after having much experience with a camera resting on a stout and solid tripod that the photographer can work successfully a hand camera. It needs not only much experience at photography, but a trained artistic eye to pick up effectively the momentary scene which can charm all beholders. For many pictorial purposes experience has taught me that one need never use a shutter working at a greater rapidity than one-twentieth of a second, but of course there are many of our modern amusements, etc., demanding the highest speed possible.

Not long ago I was shown a photograph of the Scotch express going at the rate of sixty miles an hour, but to all appearance it was standing perfectly still, every spoke of the wheels being visible, and a meaningless trail of smoke over all. Now, how false this is to the truth of motion. The running wheels of a railway carriage show only a circle of shade, with twinkling touches of light on the illuminated parts of the spokes. When motion is meant to be represented it should be thoughtfully attempted, and photography may then suggest it at least. We have another striking example of this in Mr. Muybridge's photographs of racing horses. The legs of these animals appear in the most comical positions, and do not for one moment suggest motion. The lens and plates can record attitudes which the eye can never perceive; and what the eye can not see in nature it naturally refuses to recognize in art.

Negative by James Patrick, Edinburgh, Scotland.

HARROWING.

If a photographer wants to portray in his work the impressions which nature conveys to him, he must add something to his work which is not to be found in ordinary photography. He must strike out for himself and show originality of conception; and surely originality can not be denied to the photographer any more than to the painter.

A clever essayist says: "It is not the mere copying of nature that gives artistic delight so much as the intellectual pleasure to be derived from getting the best effects out of any given materials, or adding a beauty to that which is already beautiful. It is the sense of creation which gives pleasure, and without this, or something to this effect, photography is not art."

Now this statement has to be fully appreciated in order to understand what art really is. Art and nature are two distinct things; but although distinct, no work of art can be accomplished without the blending of both, as art is based on nature. It is, in fact, treatment of nature, and one must be in touch with nature before one can ever hope to portray in his work the essential qualities of a work of art. I would ask you to get rid of the idea that you can give an exact transcript of nature. No man, whether he be an artist in color or an artist working on a monochromal scale such as the photographer, can possibly give a perfect representation of any object, therefore this imitative art fails in its only aim.

SIMPLE AND CHEAP WAY TO TITLE NEGATIVES.

Take carbon or transfer paper, black or blue, lay it on the negative on the glass side where you want the title to appear. Put a piece of writing paper on the carbon and write on the white paper and it will be transferred to the glass side of the negative without having to write backwards. Put negative in printing frame and print. It is very handy to work and can be washed off and some other title put on.

HENRY L. DILLON.

The Photo-Beacon Exposure Tables are guaranteed correct. Price, 25 cents.

HOW TO BUILD A STUDIO IN THE BACK YARD SUITABLE FOR AN AMATEUR.

FIRST-PRIZE ARTICLE.

In writing this article I am assuming that the amateur photographer intends to turn amateur carpenter and build the studio himself; I have therefore gone more fully into the details of the framing than would be necessary were a regular carpenter to be employed. The first thing to decide on is the size of the building. This will depend on several things — the space one has, the kind and amount of work he expects to do in it, and the amount of money he is willing to spend.

These plans call for a building 21 feet long, 14 feet wide, and 9-foot walls, which I consider a good all-around size.

The following bill of lumber will be needed:

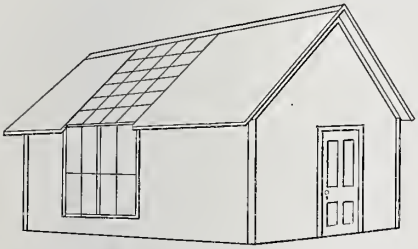
2 sills, 6 by 6 inches, 21 feet long.
2 " " " 14 "
15 floor joists, 2 by 6 inches, 14 feet long.
16 studding, 2 by 4 " 9 "
8 " " " 12 "
2 plates, " " 21 "
16 rafters, " " 9 "
3 braces, " " 14 "
600 feet drop siding.
400 feet common boards for roof.
400 feet matched flooring.
80 lineal feet 8-inch casing for cornices.
220 lineal feet 4-inch casing for cornice and skylight frame.
3 8-inch sound cedar posts.

The posts usually come 7 or 8 feet long; they should be cut in two and firmly bedded in the ground, with the top about one foot above the surface.

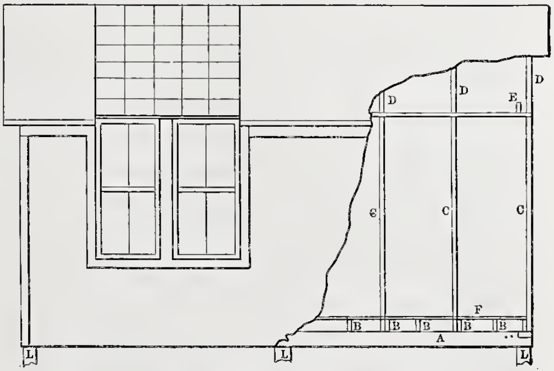
Place one post where each corner is to be and one in the middle of each side. It is understood, of course, that the side in which the skylight is placed should be to the north.

The sills, after being mortised as shown in the plan, are placed in position on the posts, and, after being leveled, securely spiked in place.

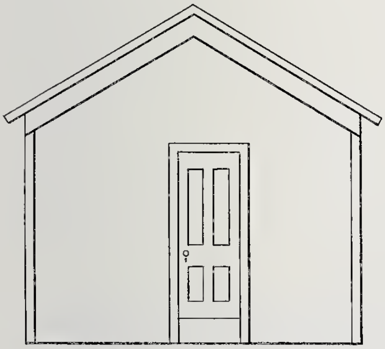
Mark off the two long sills in 18-inch spaces and place the floor joist in position on these lines; some of the roof boards may be laid down for a temporary floor. Next take the two plates and mark them off in 3-foot spaces; lay one of them on edge on the temporary floor with the marked side facing and about 9½ feet from the edge, and place one of the 9-foot studding at each mark, the other end being over the sill where they will stand when raised. Drive two spikes through the plate into the end of each studding, when the whole frame can be raised to position, the studding resting on the sill beside each alternate floor joist, where they



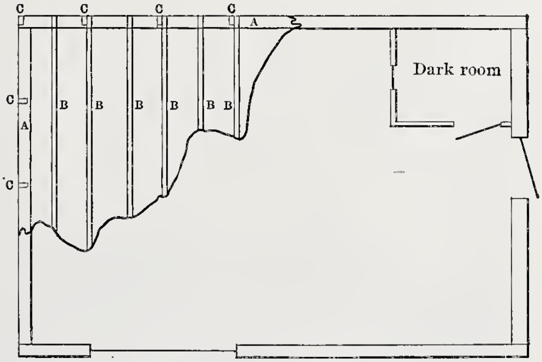
View in perspective—not drawn to scale.



Side elevation, broken part showing construction of frame. Scale, ⅛ inch equals 1 foot.

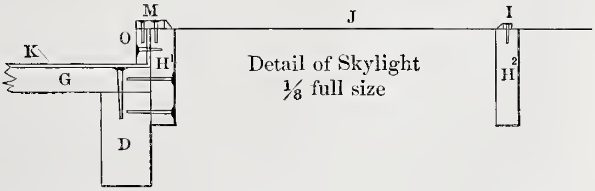


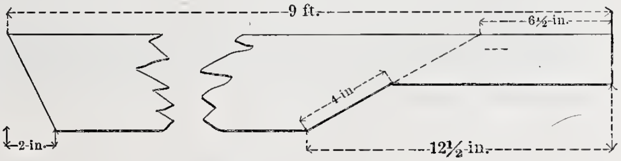
End elevation — ¼ inch equals 1 foot.



Floor plan, broken part showing details of floor framing. Scale, ¼ inch equals 1 foot.

A—Sills, 6 by 6.
B—Floor joist, 2 by 6.
C—Studding, 2 by 4.
D—Rafter, 2 by 4.
E—Cross brace, 2 by 4.
F—Flooring, 1 inch thick.
G—Roof boards, 1 inch thick.
H—Rafter for skylight, 1 by 4.
I—Batten for skylight, ¼ by ½.
J—Glass, 14 by 18.
K—Roof covering.
L—Post, 6 inches diam., 3 feet long.
M—Batten, 1 by ½.
O—Batten, 1¼ by ½.





Plan of rafter — ⅛ full size.

should be strongly spiked both to the sill and joist. A temporary brace, from the top at each end to the middle of the end sill, will hold it steady. The other side is raised in the same way.

The cross-braces are next put in position across the top, one in the middle and one 4 inches from each end.

The rafters are cut according to the diagram and put up a pair at a time, omitting the one where the skylight comes; the one opposite the skylight being fastened to a ridge piece 2 by 4 inches, 6 feet long, set in between ones at each side.

The end studding can now be put in place, four on each end, running up to the rafters. This completes the frame. The siding and roof boards are now put on; the roof boards should extend over each end 8 inches to form a cornice similar to the sides.

The cornice is cased in with the 8-inch and 4-inch boards, and 4-inch boards put on the corners.

The four sides of the skylight opening should be cased in with 1-inch boards 4 inches wide (H^1), allowing them to extend 1½ inches above the roof. The four frames or rafters (H^2) which support the glass are nailed to the casing at each end, with their top edges flush with the top of the casing.

The roof covering is now put on. I would recommend the amateur to use a good roofing paper for this purpose, as it costs less and can be put on in one-fourth the time of shingles.

Use plenty of nails in fastening it down—three inches apart is none too close. In fitting it round the skylight, allow the paper to extend to the top of the casing and nail a batten (O) 1¼ by ½ inch over it. A batten 1 by ½ inch (M) is nailed on top of this all around, making it water-tight and at the same time forming a rabbet of ½ inch for the glass to set in. Small battens (I) ½ by ¼ inch are nailed edgewise on top of the four frames, making ⅜-inch rabbet on each side. If all measurements have been carefully made, this will leave spaces 14 inches wide for glass.

The skylight frame should have two coats of white paint before the glass is put in; in setting the glass, begin at the bottom and lap each one at least 1½ inches over the one below it, after the manner of shingles. Great care should be used to make everything water-tight.

For the side light two ordinary windows will be the most convenient, as they can be opened for ventilation.

The darkroom has been fully treated in THE PHOTO-BEACON this summer, and the amateur may follow any of the plans that suit him. There should be enough of the flooring left to build it.

If the builder feels that he can afford the extra expense (about $25), I would advise him to have the house lined with matched boards. This is not absolutely necessary, unless it is in a very cold climate, but would add very much to the appearance of the interior. However, this may be done at any future time just as well. In case he decides not to line the inside, all the framing (except that of the floor) and the inside of the roof boards and sheeting should be "dressed," which will be done at the mill for a very small sum.

The outside should receive two coats of paint.

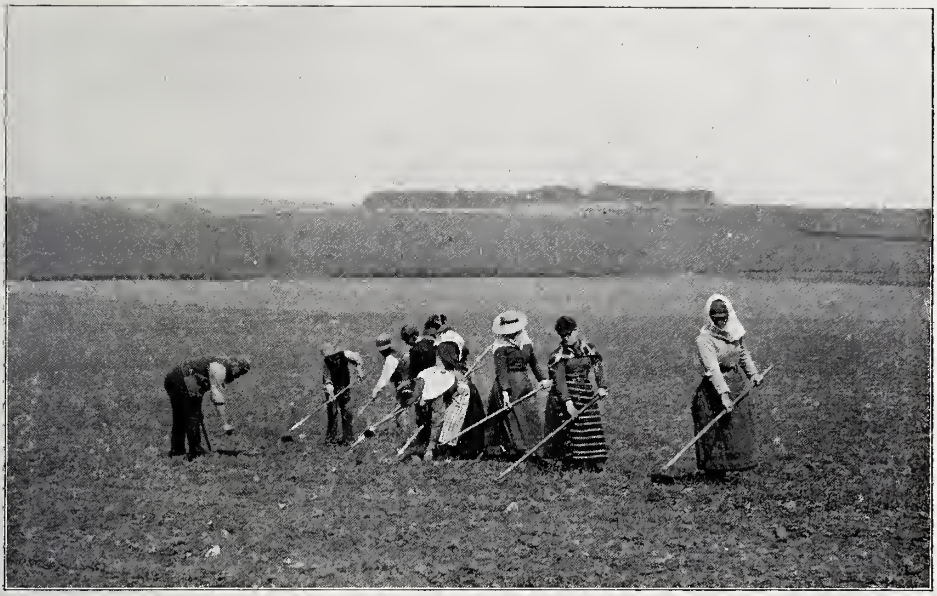
No provision for a chimney has been made in these plans, though a small one of tile, set in the ridge at one end, might be found a great convenience if the studio is in constant use.

An oil heater would probably be more convenient for occasional use.

As to cost, the figures below are the actual cost in this city:

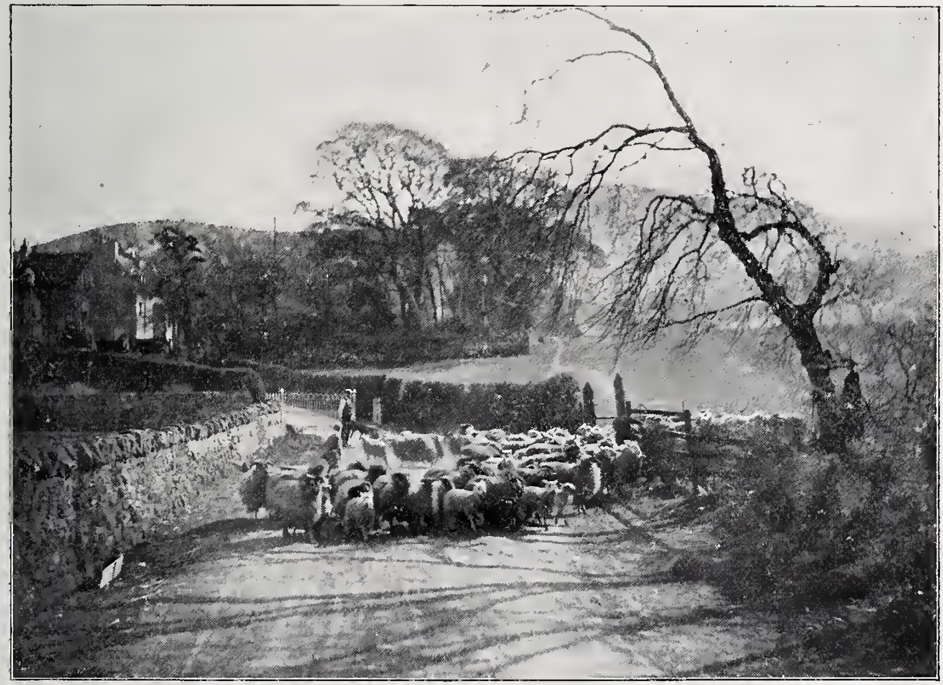
1,200 feet framing and roof boards, at $16 per M	$19.20
1,000 feet drop siding and flooring, at $20 per M	20.00
130 feet casing, at $25 per M	3.25
3 cedar posts, at 25 cents each	.75
400 feet roof paper, at 1¼ cents per foot	5.00
Door and windows	3.00
Hardware	3.00
30 lights of glass, 14 by 18 inches, at 15 cents each	4.50
3 gallons mixed paint, at $1.25 per gallon	3.75
	$62.45

IRVIN H. NELSON.
1027 College avenue, Racine, Wis.



Negative by James Patrick, Edinburgh, Scotland.

TOILERS OF THE FIELD.



Negative by James Patrick, Edinburgh, Scotland.

NEAR SWANSTON.

ON PRINTING AND MOUNTING.

The greatest drawback to amateur photography is the increasing cost of material, etc., and as every good photograph taken means one each given to one's friends, which is several, the cost is no small sum. Recently I have hit upon a plan for printing and mounting which lessens the cost and is pleasing as well. I had the lucky chance to borrow from a friend some film negatives that were made in Cuba, and wanting a few prints from each I thought best to get negatives. I printed one of each, toned and mounted four of them on a card so closely that no joining lines show. Next I tacked them up on the wall, and using a long-focus box I could get the size I wanted, which is 4 by 5, reducing the four until they were the size of one of the originals; thus I have four prints at the cost of one and mounted. It really looks neater and prettier. When the negative is dry I write in marker style beneath each print in left-hand corner its title, using a camel's-hair pointer and india ink. As to mounting I usually get heavy bristol board in various dark shades, olive-green being preferred, as it suits all sorts of prints better. Cut the size you prefer, then trim your print 4 by 5; next get a glass form and cut true. You can use a 4 by 5 plate. At any store get some common manila paper, not too thin nor too thick, and cut into 4 by 5 sizes. These I use as india-tinted centers. For mounts I usually paste center on mounts during leisure hours and when I need them they are ready. For edges for prints I take another old 4 by 5 plate and cut ¼ inch off each side and I have a print trimmer which leaves ⅛ inch india-tint center. They look equally as well as the mantello india-tint center and the cost is only 10 cents for sixteen, just the number of mounts for 4 by 5 prints that can be cut from a 22 by 28 sheet of bristol board, and the cost of four is thus less than the cost of one printed separately and mounted on store mounts.

MARY E. FLENOY.

"A GUIDE to Plain Penmanship," by F. Dundas Todd. Price, 25 cents. For sale by The Photo-Beacon Company.

PERRY, PERRY & PERRY, 189 La Salle street, Chicago, have introduced a new design in moving-picture cameras entitled the "Spirograph," at a price that places it within the reach of the average amateur.

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THE PHOTO-BEACON.
AN ILLUSTRATED PHOTOGRAPHIC JOURNAL,
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of THE PHOTO-BEACON COMPANY.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

Accepted literary articles will be paid for upon publication.

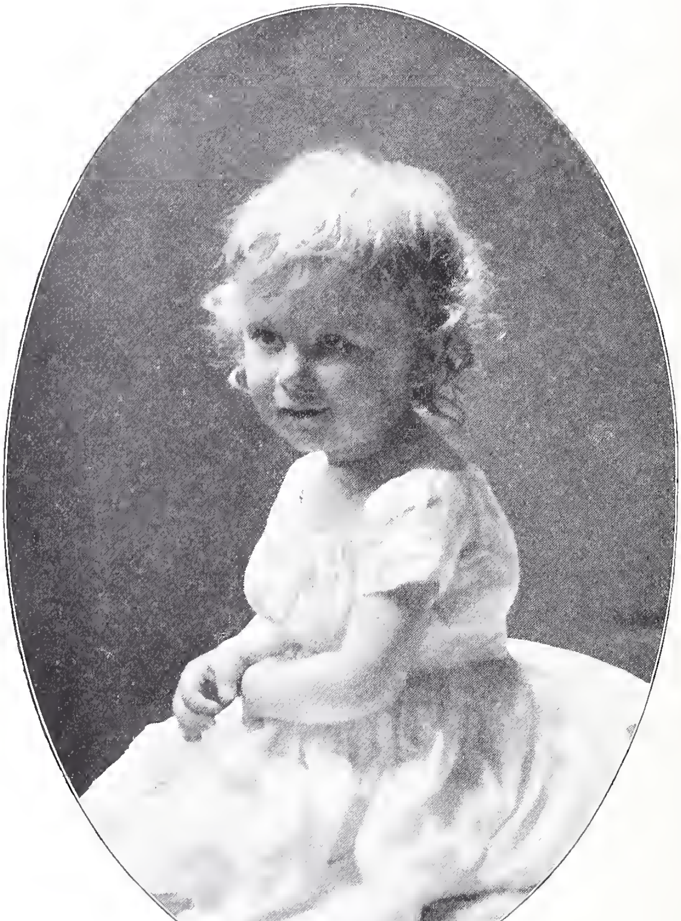
Secretaries of photographic societies are requested to favor with brief reports of their meetings.

Subscribers advertising secondhand apparatus for sale or exchange, special articles wanted, help or situations wanted, *one insertion free*.

To insure insertion in any particular number, copy for advertisements must be received not later than the 20th of the month preceding.

All communications relating to THE PHOTO-BEACON should be addressed to

THE PHOTO-BEACON COMPANY,
TRIBUNE BUILDING,
CHICAGO, ILLINOIS.
Eastern Office: 80 Wall Street, New York.



Negative by Mrs. W. W. Pearce, Waukegan, Ill.

SUNSHINE.

(First Prize, Competition 18.)

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. FEBRUARY, 1900. NO. 2.

HOME HOBBIES.

As far back as he can remember the editor has been addicted to hobbies, especially of an intellectual kind. But in recent years he has been getting a new education. There are some boys at home and they prefer to be doing something, so he is busy trying to learn how to handle tools. Now other folks have young folks, and doubtless these young folks are a good deal like the editor's young folks and their fathers like the editor. For instance, Santa Claus one Christmas gave his boys some tools, and the boys wanted to use them. But what could they make and how could they make it? The editor did not know, so for one day he trotted around Chicago trying to get a beginner's book on Carpentry. But there was nothing of the kind in existence. There and then he decided to put that matter right some day. That was two years ago. He now keeps the promise by starting up a supplement in THE PHOTO-BEACON, to be devoted to the interests of those who like to make things and do things. It is to be no scissors-and-paste production, but original matter prepared especially for this journal by two exceedingly practical men. He seriously trusts that the readers will just bombard them with questions.

For twenty years the editor was a teacher, and that in the days when the idea of education was to cram as many facts into a child's head as was possible. But that is not education at all. The American ideal is to develop the powers of observation and the reasoning faculties, and that is emphatically a better "leading out" than is the accumulation of rubbishy data about the heights of mountains and the length of rivers.

To develop the power of seeing things as they are — a most valuable acquisition, since most of people see things as they *think* they are — the drawing of objects and the making of them stand in the first rank. Therefore, every child should be encouraged to "make things," and above all, things that interest him. In fact, it is better to buy tools than toys. And so with older folks. The man who has never handled a few really good tools can not realize how much real honest, healthful pleasure there is in planning and making an article, no matter how crude it may be.

MR. PATRICK'S PICTURES.

We have had a large number of letters inquiring if Mr. Patrick's views are for sale. We understand that Mr. Patrick makes up his Swanston pictures in sets of a dozen each, printed in platinotype. His address is Comiston Road, Edinburgh, Scotland.

HOW TO ORGANIZE AND CONDUCT A CAMERA CLUB.

For the best article on this subject we offer a prize of $5. Competition closes March 15, 1900.

WOOD-CARVING.

The book on this subject is now ready. Price 25 cents. Wood-carving looks very difficult, but it is really very simple, and for beginners the only tool necessary is a knife costing a quarter. Lots of beautiful work can be made with this tool. The book on "Gouge-work" is also ready. "Picture-frame Making" is being rewritten to bring it up to date, but will be ready by the middle of February.

OUR PICTORIAL COMPETITIONS.

A very large number of prints were entered for competition in the various classes, but all in all they were much below the average of previous contests.

The following are the awards:

No. 17.

First prize — George M. Crowe, 2312 East Second street, Los Angeles, California.

Second prize — Chester M. Whitney, Westminster, Massachusetts.

Third prize — John W. Schuler, 100 Park Place, Akron, Ohio.

No. 18.

First prize — Mrs. W. W. Pearce, 538 Steel street, Waukegan, Illinois.

Second prize — A. P. Pierce, East Otto, New York.

Third prize — E. F. Reese, Cherokee, Iowa.

No. 19.

First prize — Carl C. Distler, 1014 New England building, Cleveland, Ohio. (Only entry.)

No. 20.

First prize — Mrs. Flora J. Glazier, Essex, Montana.

Second prize — Haas Brothers, Globe building, St. Paul, Minnesota.

Third prize — George E. Sanborn, Norwood, Massachusetts.

NOTES ON THE PRIZE PICTURES.

A few of the competitors have attached particulars to the pictures and these we publish, as they may interest many of our readers.

Class 17, first prize, was taken with a Premo camera, on Seed non-halation plate, on December 18, 1899, at 3:30 P.M., stop 64, exposure one second. Printed on Aristo-Platino.

Second prize — No particulars.

Third prize — 8 by 10 view camera, Cramer crown plate, stop 64, exposure ¾ second. Printed on special rough Velox. No date or hour given.

Class 18 — No particulars given.

Class 19 — No particulars given.

Class 20 — First prize. The first exposure was made on Seattle harbor; the next on Salt Palace, Salt Lake City. The arches under which the boats seem to pass is the lower part of the "Palace."

Second and third prizes are evidently due to the melting and running of the film.

Our readers will please remember in future competitions to furnish such particulars as they think will interest subscribers.

PICTORIAL COMPETITIONS FOR 1900.

Competition No. 22.—Intensification. Closes February 28.

Competition No. 23.—Snow pictures. Closes March 31.

Competition No. 24.—Local intensification. Closes April 30.

Competition No. 25. — Pictures of children under seven years of age; not necessarily portraits. Closes May 31.

Competition No. 26. — Reduction. Closes June 30.

Competition No. 27. — Flower pictures. Closes July 31.

Competition No. 28.—Local reduction. Closes August 31.

Competition No. 29.—Genre pictures, or pictures that tell a story. Closes September 30.

Competition No. 30.—Reducing excessive contrasts in a negative. Closes October 31.

Competition No. 31. — Landscapes. Closes November 30.

Competition No. 32.—Ray-filter pictures. Closes December 31.

RULES.

1. In the purely pictorial competitions, Nos. 21, 23, 25, 27, 29 and 31, there is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given, also the printing process.

2. In the technical competitions, there should be sent, first, a print from the negative before work is begun upon it; second, another print showing the effect of the operations. Along with these should be sent a very brief description of the course of procedure.

NOTE.—Methods of performing the various operations are to be found fully described in Part II of "The Reference Book of Practical Photography." In No. 32, ray-filter competition, send one print made with ordinary plate, and one on color-sensitive plate with color screen.

3. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

RULES.

1. Write on one side of the paper only.

2. Be brief, sending less than one thousand words, if possible.

3. Never mind style — use the smallest words you know.

4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.

Negative by Carl C. Distler, Cleveland, Ohio.

CHRISTMAS CARD COMPETITION.

(FIRST PRIZE.)

PRIZES.

First.—Books to the value of $5.
Second.—Books to the value of $2.50.
Third.—Books to the value of $1.
To be selected from our catalogue.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

5. Write your name and address at the end of the article.

6. Mark the envelope "Literary Competition."

7. Preference given to practical articles, that is, those that tell "how to do things."

THE PHOTO-BEACON this month fairly outshines itself, both in illustration and matter. The sheep pictures delight me very much.

ALFRED CLEMENTS, Philadelphia.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES.

CHAPTER II.

After due consideration I have come to the conclusion that the simplest and most useful way of treating this subject of "Artistic Photography" will be first to fully describe the practical details of working, so that, after having had the *methods* of the pictorial worker clearly presented to him, the reader will the more readily be able to apply the *principles* which will hereafter be laid down.

In the first place, if certain preconceived notions with regard to the technical quality of negatives exist they must be laid aside, for it may be often necessary, in order to obtain a particular effect, to purposely produce a negative lacking those very attributes which the technician would deem essential. The pictorial photographer, in short, does not seek to produce negatives of any particular type; his aim will always be to keep his ideal — the idea or sentiment which he intends to convey by means of his finished photograph—clearly in mind, and all through the various stages of its production he will work to this end. If the subject be a strong one, full of vigorous contrast of light and shade, his aim will be to get a plucky, sharply graded negative. If, on the other hand, the beauty of his subject depends upon its subtle and delicate half-tones, he will endeavor to produce a thin, flat type of negative which will most readily yield those qualities in the print. In truth the successful pictorial photographer must really be a highly skilled technician, but at the same time one who will refuse to be bound down by the narrow conventions of technic.

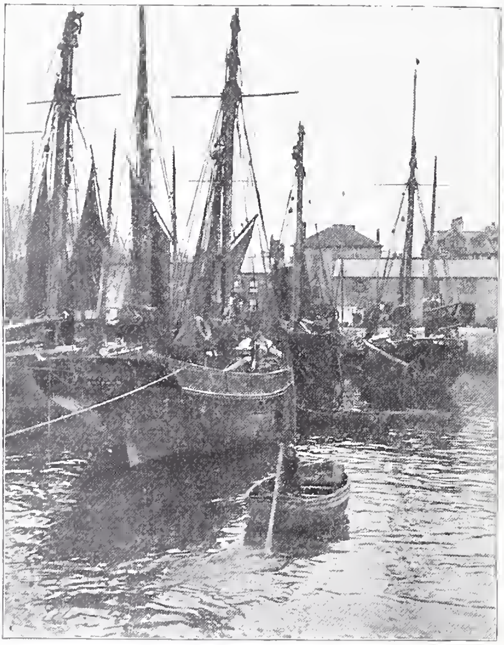


FIG. 4.

In general, it will be found that a softer type of negative than is commonly regarded as the perfection of excellence will be required for artistic expression, it being far easier in practice to lighten tones or values which print too heavily, than it is to perform the converse operation with the lights of an over-dense negative.

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*Copyright, 1900, by F. Dundas Todd.

The advantage of using isochromatic plates can not be overestimated. The little extra care required in their manipulation is amply recompensed by the far more truthful results which are obtained with them. Delicate gradations of light and shade and subtle effects of atmosphere can be secured by their aid, which ordinary plates would utterly fail in rendering. Particularly is this the case when photographing clouds, the difficulty of securing which, with even an approximation to truthful effect when using ordinary plates, is sometimes almost insuperable. Their great advantages are also equally manifest when dealing with subjects in which water plays a prominent part; indeed, it is hardly possible to do full justice to the delicate gradations of light and shade or the tender reflections on its limpid, luminous surface, with any other kind of plate. This advice is not prompted by merely personal preferences, but is further justified by the fact that nearly every photographer in this country who has attained to any eminence as an exponent of pictorial work is a user of isochromatic or color-sensitive plates.

The question of "focus" naturally calls for early consideration. It is one that has possibly caused more discussion and greater divergence of opinion than any other connected with photography. No rule as to when a photograph should be sharp, or when it should be out of focus or fuzzy, or as to the degree of its sharpness or fuzzyness, can be formulated. In every case it is a matter in which the nature of the subject, or the desired rendering of it, must be the guide. The mere fact that

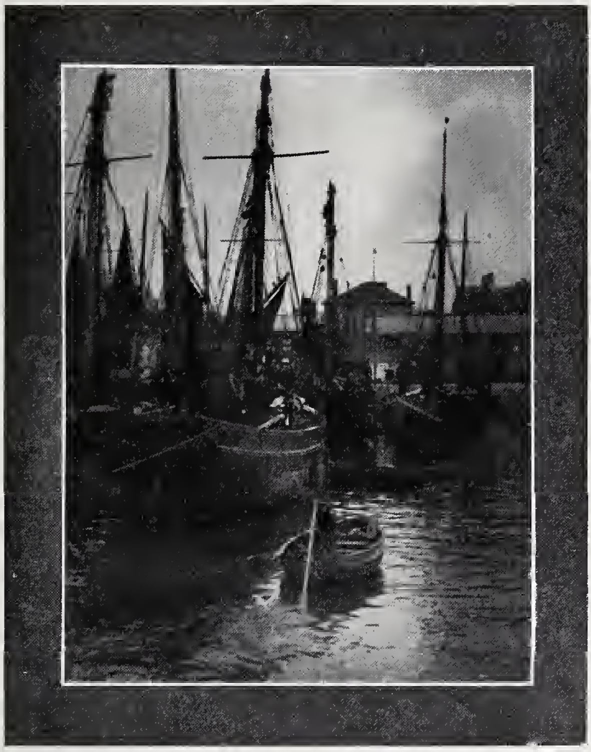


Fig. 5.

a photograph is made unsharp does not in itself confer upon it any artistic quality; nor is unsharpness by any means essential to pictorial effect in photography. A photograph may be eminently pictorial and yet have every detail clearly defined, and in support of this statement we may refer to the beautiful work of Colonel Gale, Robert Demachy, J. B. B. Wellington and many others.

At the same time, it must be remembered that the tendency of the lens is always to give far more detail than will in many cases be desirable, and in order to avoid this defect certain measures for the suppression or toning down of the excess of definition have to be adopted.

Although no rule can be laid down as to how sharply defined any particular photograph should be, yet it may be accepted as an axiom that if the first impression created by it is that it is either sharp or the reverse, that we have at any rate in a great measure failed in our object. If the motive of the picture, the sentiment or idea intended to be conveyed to the mind of the observer, is realized, we shall not notice whether the details of the composition are either sharply defined or out of focus.

One of the readiest and most convenient ways of securing what may be called a "pictorial focus" is by the use of a single lens, the aperture of which has been enlarged until the necessary amount of diffusion of focus is obtained. This result is arrived at by introducing the defect called by opticians "spherical aberration," and the presence of which is recognized by the fact that it will be impossible to focus critically sharp any portion of the image. A single lens used in this way is capable of producing the most artistic results, yet without any tendency to that excessive and in most cases offensive blurring which is often the result of employing other methods.

In order to practically illustrate what I have been saying upon this topic, I will refer my readers to the two photographs which illustrate this article, and the difference in the two renderings can not, I think, fail to strike even the most superficial observer.

It is, of course, owing to the nature of a process-block illustration, which in itself tends to remove the biting definition of the original, extremely difficult to show the striking contrast between the two original prints, but pictorially the difference is sufficiently obvious to make my point clear.

The illustrations are printed from the same negative, the difference in the two renderings being solely due to the fact that in one case the print was made direct from the negative as produced by the lens; and in the other steps were taken to suppress or modify its excessive wiry definition. In Fig. 4, which, in the block illustration looks less offensive than the original print, we have what appears to be an ordinary and somewhat commonplace photograph of a not particularly interesting subject. The first fact that impresses one is the uniform sharpness of the whole picture. Every ripple on the water is clearly defined, producing that disagreeable effect of arrested motion which so often mars the pictorial effect of photographs of objects in motion. The masts and rigging of the shipping stand out with biting sharpness against the sky so clearly that we may easily, if we will, count each rope or stay. Indeed we almost imagine that we can hear the remark, "how wonderfully clear the rigging is." But the object in this instance was not to produce a topographically correct record of a group of fishing boats at the quayside, but something of a more truly pictorial character.

Clearly then, judging from Fig. 4, that object was not to be attained by the unaided, or rather, uncontrolled, action of the lens and light upon a sensitive plate, or by what are called "purely photographic" methods.

The question then arises, can the bare photographic record thus produced be so improved or controlled as to produce a result which may be said to have some pretensions to artistic expression?

Let us look at and study Fig. 5 before we attempt to answer this question. It was printed from the same negative, but with a piece of thin celluloid interposed between its surface and that of the printing paper. The result is a general softening of the definition and a suppression of the wiry definition found in the first print, and we no longer feel tempted to count the ropes and spars or the ripples on the water. They are there, but the fact is not aggressively apparent; we are unconscious of the fact that they are either sharp or the reverse. The photograph pleases us because of its pictorial quality, which is mainly the result of the simple treatment to which it has been subjected in printing.

Its pictorial effect has been further improved in the second illustration by a suppression of the scattered lighting which constituted another serious defect in the original print, a point to which I shall refer at a later stage.

Although the method of controlling definition adopted in this case was applied during printing and in some cases a valuable one where a negative is required to serve more than one purpose, yet the plan which I consider to be the best is to suppress the excess of definition by careful focusing prior to exposure. By "careful focusing" I mean just throwing the image sufficiently out of focus to produce the effect desired. This object can be attained most satisfactorily by examining the image on the ground-glass screen, and in this way just the required amount of diffusion can be secured.

Neg. by Bushong & Feldman, El Paso, Texas.

A FEW HINTS FOR THE BEGINNER.

When I began to practice photography it was with a borrowed camera. It may not be possible, it is not practicable, for every one to follow my example in that particular. But to one who knows little or nothing about photography the choosing of a camera is like ordering from a French bill of fare to an Englishman.

I am not going to give such plain directions that none who follow them can make a mistake in buying a camera. I am not able to do that, and if I were THE PHOTO-BEACON would need a supplement to contain half what I should write. And yet a few hints and suggestions may help matters a little.

When you see a little square box of tricks with a fixed focus and no ground glass, pass it by. It may be a model of simplicity, it may load in broad daylight, but it is not what you want. Hand cameras have a broad field of usefulness in the hands of an expert, but for a novice to begin with one is a waste of time, money and patience.

Do not make the mistake of thinking that any old box will do for a camera if it only has a good lens. Some manufacturer has advertised, "It's all in the lens." This is not true. The real fact is it's all in the way it's used. Another point to bear in mind is that when a camera has been used a week it is old. But a lens may be used a year or more and still the maker is usually ready to exchange it for a better one when you are ready to pay the difference in price.

The various makes of folding cameras with double swing back and sliding front are, to my notion, the most suitable for the amateur's use. They are, or should be, so made that plate-holders, cut film-holders and roll-holders are interchangeable. A camera of this sort may cost a little more than some of the other patterns, but it will be well worth the additional price. One advantage of such a camera is that it enables one to use plates or films as circumstances may demand.

I will not attempt to discuss the relative merits of glass and celluloid as a negative medium. This has been argued pro and con by far more able writers than I until the subject is worn threadbare. My individual preference is for cut films, but the price at which they are sold puts them almost beyond the reach of one who must study economy. I use plates, films and bromide paper, and make both good and bad negatives on all three.

Do not buy a "developing outfit," a "printing outfit," or any other "outfit" that has not even the merit of being cheap. Put all your money in a camera with lens, shutter and tripod. Borrow enough from your friends to buy two or three plate-holders and printing frames, and subscribe for at least one photographic periodical. Then trust to your own ingenuity and the hints you will receive from the magazine to contrive all other necessary appliances.

You can use a closet for a darkroom if you have one available. If not you can do your developing at night.

A box large enough to hold a lamp or candle can be utilized for a light by providing it with a window of ruby fabric or two thicknesses of orange or yellow paper, and making a few holes for ventilation. The ventilating holes must, of course, be so protected that no white light will escape to fog your plates.

As for trays, any number of them can be made by simply lining suitable boxes with oilcloth. Still better trays are made of wood and coated with paraffin, or a mixture of equal parts of paraffin and gutta-percha. Either of these coatings should be burned in with a hot smoothing-iron, and trays so prepared should never be used for hot water.

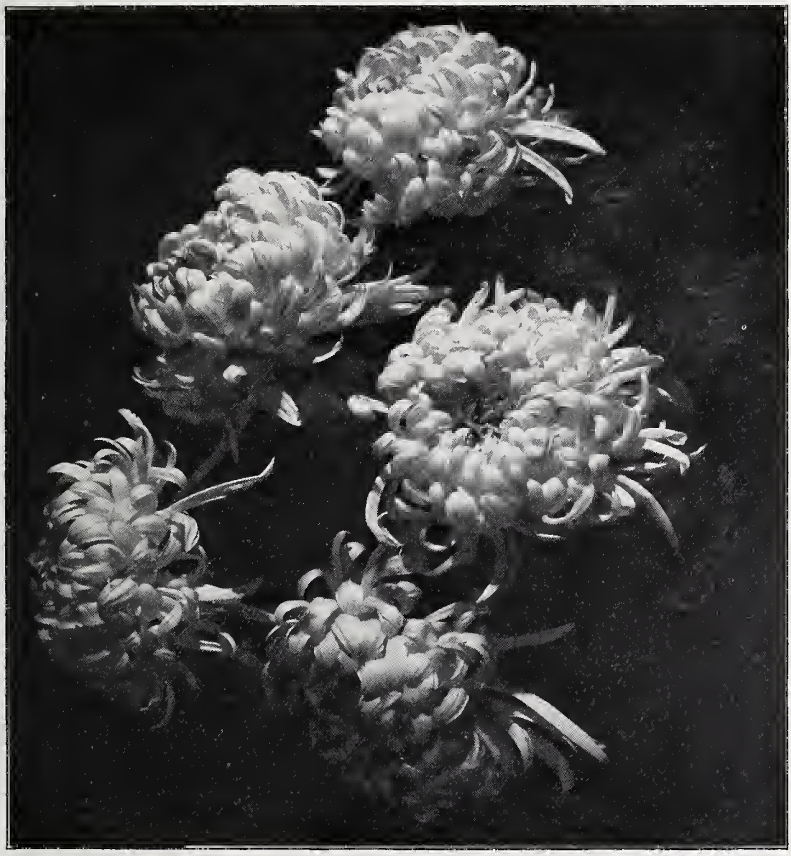
Now a word about plates and paper. Dry plates are all good, though some may be better than others. Don't think that because a plate is sold for thirty or forty per cent discount from the regular price that it is worthless. Quite likely it is just as good as the more expensive ones and is sold cheaper because the maker has to compete with those who have a repütation and trade already established.

About the best paper for a beginner is one of the various brands of gelatin paper. You can easily spoil carbon tissue or platinum paper; and they are so expensive that few amateurs can afford to spoil them in large quantities. But gelatin paper you can never spoil. The manufacturers do that before they put it on the market. I don't mean to say that gelatin paper is *quite* worthless. It is just the thing for the dollar-a-dozen professional and the amateur who has a great many acquaintances to whom he must give photos. But if you get any *pictures* that you want to give to your *friends* you had better use some other printing process. But it will be time enough for that after you have thoroughly mastered the rudiments of picture-making.

Don't be afraid of trying new things when your pocketbook will permit. When you are unsuccessful with some new plate, paper or chemical, don't give up until you locate the trouble. Carefully follow the instructions of some one who has been over the ground before. You get the benefit of years of study and experience with every box of plates, with every package of paper, with every ounce of developer. It will be time enough to try some different developer on a plate when you are unsuccessful with the one the manufacturer recommends.

Don't expect to buy a camera and start right in to make it pay its way. I don't mean that you mustn't sell a print. Though I used to be a professional photographer, I never felt like cutting the throat of the amateur who would occasionally sell a picture. I see no more reason why the amateur photographer should refuse to sell his work than the amateur artist should do likewise.

Let me tell you how an experienced amateur friend of mine does. Of course he gives away pictures to his friends, but sometimes acquaintances will come and ask him to take a picture. How much will he charge? His answer always is: "I'm not in the photograph business. I take pictures for pleasure, not for profit. I would like, though, to take the picture for myself, if you don't object." They never object; so he takes the picture and tells them when they can see a finished print. They are sure to come to see the picture and if it is good they are almost sure to say: "Oh, that is fine. Can't you print me one? I'll pay you for it." "Well," my friend says, "I haven't much time; but if you say so, I will print and nicely mount one for half a dollar." His 5 by 7 camera pays its way, and he isn't economical; but he has had considerable experience. J. EDGAR ROSS.



Negative by E. P. Sperry, Oak Park, Ill.

CHRYSANTHEMUMS.

PHOTOGRAPHING FLOWERS BY WELSBACH LIGHT.

The picture of chrysanthemums reproduced shows the possibility of making exposures by Welsbach light. The flowers shown are white with yellow center. Exposure was made by one lamp at a distance of three feet. The plate was a Stanley three and one-half years old. Stop *f* 11, exposure five minutes.

"First Step in Photography." Just the book for beginners. Price, 25 cents.

IMPORTANT PHOTOGRAPHIC PROBLEMS THAT REQUIRE INVESTIGATION.

After looking at the marvelous results of modern photographic work one would almost wonder that there could be such things as any problems requiring investigation.

The speed and quality of our plates, and the perfection to which the manufacturers have brought their printing papers are such that one can hardly realize that, from a scientific point of view, such a small advance has been made in our knowledge during the past fifty years upon such subjects as the action of light in the formation of the photographic image, or of what that image consists, and the question arises: "Are our photographic societies, especially the parent society, carrying out their duties when they allow such important problems to drift on year after year without at least some slight attempt at a systematic organized investigation on a thoroughly scientific basis?"

Of late years an attempt has been made to claim for photography a place among the arts, and to ignore its scientific basis almost entirely by placing the emulsions and printing papers on the same level as the colors of the artists' colorman.

Artists contend, and contend most truly, that photography is not, and never can be, an art. There is as much difference between photography and art as there is between the verbatim reports of our police courts and those marvelous examples of literature in which Sir Walter Scott threw a halo of romance over Scotland and her people. It is true that occasionally the police court will give us a character that, for true nobility and grandeur, the novelist can not equal. So the camera will now and then produce an effect of light and shade that no artist could ever compete with, but in both cases the bulk of the pictures of life from the police courts and the representation of nature in our photographs have too heavy shadows.

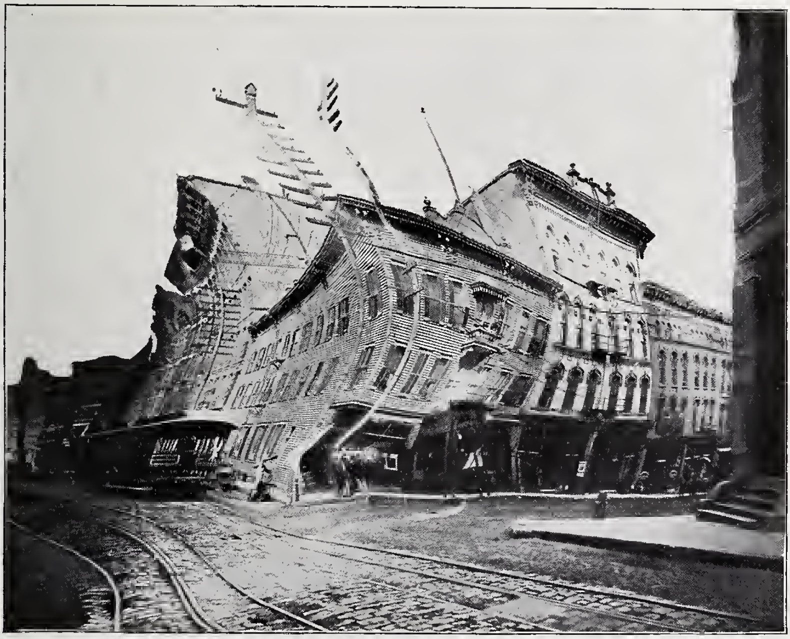
Art is nothing more than dreamland, and an artist is a man who reproduces in his waking moments not what he really sees, but what it appears in the fantastic dreams of his imagination. But photography has done a great work by dragging art out of the sea of falsehood in which it was engulfed in the past. Before the days of photography few people really used their eyes — they accepted the artist's false drawing as correct; but directly the photograph began to teach the world the true representation of form, then began a silent revolution in the art world; and there is no doubt that, from an educational point of view, photography has done a great work, because it has not only taught the artist correct drawing, but it has trained every one, from the board school child upward, to use their eyes, and detect the difference between the true and the false in the representation of form.

We will now look at photography from a more scientific standpoint, and, first, as to "light" itself in connection with its action on the photographic plate according to the absorption theory of light. In passing through a transparent medium, the molecules of the latter take up the waves of certain periods, and the remainder pass through, giving the color of the medium. Now, if we take a plate coated with a slow emulsion (one that used to give a good ruby color in our old emulsion-making days), one can understand that the blue and more actinic rays taken up or absorbed in the film have been converted into the light action that has taken place on the particles of silver bromide, and that the slow vibrations are allowed to pass through, thus giving the ruby color transmitted through the film. In this case the theory seems supported by practice; but how about a rapid emulsion that transmits blue rays? The molecules of this film have taken up the waves of the slow period, and yet we obtain a much greater speed of plate, although the more rapid vibrations of the blue or actinic rays have passed through the film. How can we explain these slow vibrations, absorbed or taken up in the film, acting more rapidly on the particles of silver bromide?

When we photograph the spectrum, we have even greater difficulties to explain. If we throw a spectrum on a screen, and look at the blue portion through a piece of blue glass, we find that the glass stops those rays very little; in other words, it is transparent to them. And yet we know that, if we take a rapid plate which transmits blue rays, the blue rays in the spectrum to which the plate ought to be most transparent have been most active in their action on the silver bromide particles. Some one may say that it is because their action is based on a similar law of vibration to that of a tuning-fork, which will communicate its vibrations to another of the same note. But, if that is so, why do not the red rays of the spectrum act more strongly on a slow film transmitting red or ruby rays than those at the blue end of the spectrum. I think you will agree with me that we have here a problem requiring investigation.

I now come to the question of the action of light on chloride of silver, on which are based our printing-out processes. The first thing we want to know is, of what does this photographic image consist? If we take some pure chloride of silver with a proper excess of silver nitrate, and expose it to light, we will find that it will assume a slate-blue tone, and refuse to bronze; and, if it is treated with hyposulphite of soda, it will be almost entirely dissolved away. So our photographic image is not metallic silver from the reduced chloride of silver; indeed, the only part the chloride seems to play is that of an accelerator in the formation of the image.

But, if we add some organic matter to the chloride of silver and expose it to light, we shall find that it darkens usually to a dark-brown hue, and then becomes bronzed, which color is comparatively unaffected after fixing. This shows that the image consists of silver combined with colored organic matter. We now want to find out how much silver there is in this compound.



Negative by Haas Brothers. St. Paul, Minn.

ACCIDENTAL COMPETITION.

(Second Prize.)

I think the best way to do this is to take a sheet of albumenized paper, and, on sensitizing it, we shall find that it will take up about twenty-eight grains of nitrate of silver. We will then expose it to light until it darkens all over to just short of the bronzing stage. Then, if we treat it as an ordinary albumenized paper print, we shall find in the washing waters about fourteen or fifteen grains of the silver, in the fixing bath another ten grains or so, in the washing water, after fixing, about two grains, and in that blackened sheet of paper, measuring 23 by 17 inches, there will be barely a grain of silver left in the deposit.

That being so, can we call it a silver image at all? The fact appears to be that it is colored organic matter produced by the action of light on the silver in which it had previously been in combination. And that, after the formation of that colored deposit, about 97 per cent of the silver can be removed, although the whole 100 per cent was necessary to produce it. If this is so, the next question is, What is the action of the gold of the toning bath? Is the gold simply deposited on the organic matter forming the image, or does it keep some of the silver from being removed in the hypo bath?—in other words, is the greater permanence of a gold-toned print due not only to the presence of the gold deposit, but to a locking-up (so to speak) of some of the silver as well? I think this is probably the case, and that some of the subchloride of silver is formed into an insoluble hyposulphite of silver, which is not redissolved in the excess of hyposulphite of soda in the fixing bath.

I think the following experiment will show this. If we allow sulphuretted hydrogen to act on a print, it will at first slightly darken the image until the bleaching of the organic matter commences. This same darkening action by sulphuretted hydrogen takes place on subchloride of silver that has been treated with hyposulphite of soda.

As far as the permanence of the image is concerned, this extra silver is, of course, an advantage, but, unfortunately, I have found that the yellowing of the whites in old albumen prints is, in many cases, due to their having been in a toning bath. The gold prevents the whole of the silver being removed by the hypo from the white parts of the print, and the sulphuretted hydrogen in the atmosphere, slowing, converts this silver into a yellow sulphide. If you will make the following experiment you will find that this is so. Take two pieces of sensitized albumen paper, and without any exposure to light, wash them to remove the free silver nitrate. Then soak one piece in a toning bath for ten minutes, then fix and wash both pieces in the usual way. Now, if you expose those two pieces of paper to the action of sulphuretted hydrogen, you will find that on the one that has been in the toning bath there is a formation of yellow sulphide of silver, showing that the gold had prevented some of the silver being fixed out in the hypo bath, whereas the one that had not been in the toning bath has kept its purity of color.

We often see in the text-books that it is best to tone before fixing; but if the gold prevents the whole of the silver being removed from the whites of the print, and is the cause of the faded yellow photographs we so often see, would it not be better to fix first, to remove the silver before depositing the gold on the image?

I need hardly point out what an important matter this is to the professional photographer, and what is required is for somebody (say the London and Provincial Photographic Association) to start a regular systematic and scientific investigation into the whole subject; because, after all, to get the best results, we must have a printing-out process.

Photographs by blind processes requiring development, or semi-blind, like platinum, are very fine when everything is just right. But the waste of material is, and must be, something enormous, for the professional man to turn out only the very best work.

So far I have only spoken about light and the visible photographic image. I now come to the subject of the latent image requiring development. We will take the old wet-plate negative first,

Negative by J. W. Schuler, Akron, Ohio.

A COUNTRY ROAD.

(Third Prize, Landscape Competition.)

Here we have a collodion film mainly, on the surface of which are particles of bromide and iodide of silver, with an excess of free silver nitrate. After exposure to light, development causes a building up from the free silver nitrate of an image upon the particles of silver bromide which have been acted upon by light. It seems to me that the subbromide theory explains this action very well, although even in this case we find that the physical characteristics of the film have an important bearing on the speed of the plate, the high or low-temperature cotton, and the amount of alcohol used in the collodion, all having a controlling action.

But, when we come to consider the dry plate with alkaline development, all the old theories are topsy-turvy directly. Everything is on an entirely new basis. So far as the particles of washed silver bromide are concerned, the alkaline developer will reduce those which have *not* been acted upon by light as rapidly and perfectly as those which have been. Then we have to explain reversal of the latent image. It is of no use guessing that the action of light is a chemical, a physical or an electrical one, unless we can explain reversal as a natural sequence. We have to explain, first, a latent negative image, then a latent positive one, then a visible negative deposit. We have here no building up of an image from the silver in other parts of the film. Every particle of washed silver bromide imbedded in the film of gelatin or collodion has to act on its own account. It has first to be bound up or protected from the action of the developer by the film. If it were not for this protection by the gelatin, dry-plate photography would be an impossibility with alkaline development.

What the actual momentary action of light on a particle of silver bromide is it is almost impossible to say. All we can really say is that, by some means, the protective property of the gelatin over it has been destroyed, and the developer is able to reduce it. As many of you know, my own impression is that there has been a vibration of the atoms of bromine and silver sufficient to destroy the protection of the gelatin surrounding them, but not sufficient to free the bromine.

If the light action is continued, we obtain reversal — i. e., something has occurred to again prevent the developer reducing that particle of silver bromide to a metallic state. It is no longer a question of the physical protection of the gelatin; that has already been destroyed. What I believe does take place is a chemical action, namely, a reduction of the particle to a subbromide. The over-exposure to light, producing a continued vibration of the atoms, has caused the liberation of the bromine, which combines with the gelatin immediately surrounding the atoms of silver, and then this bromine acts as chemical restrainer or protector against the reducing action of the small amount of the developer that is able to soak into the film; and thus we obtain reversal. Of course the reason we can not get the amount of density on an over-exposed plate is because there has been a reversal of some of the particles of silver bromide. The silver is in the film to be reduced to a metallic state, if we could only clear the free or liberated bromine out.

There are a great number of other problems requiring investigation, but I will only refer to one which may be taken up by those who are interested in the pictorial aspect of photography rather than the chemical.

Although photography can never be an art, it does not follow for one moment that it will not produce a pleasing, and even artistic, representation of nature. I do not mean the miserable, dull, gloomy, depressing examples found in our exhibitions during the last few years. For instance, the Salon would make a most suitable meeting-room for a club of undertakers — that is, if the average type of female beauty exhibited in the portraits did not scare the members away. To see these exhibitions, one would think there was no such thing as light and sunshine. What we want, for a change, are pictures with a mass of light half-tones, and with only a few intense shadows to give brilliancy. Most photographs suffer through the darker half-tones being too heavy. The best way I can see at present to get over the difficulty is to develop only to that point where the deepest shadows in the negative would remain clear glass when fixed, and then intensify the image heavily. What we want is to raise the scale of half-tones in the print away from the deepest shadows.—*Read before the London and Provincial Photographic Association.* HERBERT S. STARNES.

A SPECIMEN PHOTOGRAPHER'S ADVERTISEMENT FROM MANILA.

Mr. W. W. Wyckoff, York, Nebraska, kindly sends us a specimen of advertising issued by a photographer in Manila, which we reproduce on opposite page. We have no doubt it will be read with interest by members of the profession in this country. The craze for low prices does not appear to have yet reached that part of the world.

CLOUDS FOR TRANSPARENCIES.

When making a transparency it is seldom that a sky can be printed on the same slide as the foreground — it is almost sure to show at the horizon; it is, therefore, better to print the sky upon another plate and use this as a cover-glass.

Proceed to make the foreground slide, and see that the sky is perfectly clear. After this, the usual plan is to print the sky on another plate and reduce the lower part with ferricyanide so that it fits; but this is sometimes difficult, and the reducer is apt to leave a stain. Therefore I adopt another plan; but as the slide must be made through the camera by reduction, the contact process is not available; but this ought not to deter any, as I think this the best plan for all transparencies.

When the foreground slide has been

made, and is perfectly dry, put it in a double dark slide, with a ground glass behind, place in the camera, pull both shutters open, and proceed to focus and arrange the sky upon the ground glass. This is easy to do, as the foreground slide, being in front, occupies just the place it will in the finished transparency, and you can see at once what space to fill, and if the sky negative is suitable. If satisfactory, remove the ground glass, and, in the darkroom, replace with a plate, laying the plate on to the foreground slide film to film, so that it is exposed through the latter. Cover with a black card or two, so as to press them tightly together, then expose in the usual way, taking care not to give too long an exposure.

Develop with the same developer used for the foreground (i. e., if pyro-soda was used by the latter, let the sky be developed with pyro-soda, and not ammonia or metol, and vice versa), and of the same strength, so that both may be the same color. The result will be that when dry, the sky will perfectly fit the foreground; in fact, it will be hard to tell that they are not on one plate from one negative if carefully done.

I ought to say, if the foreground slide has some places nearly bare glass, these would print through and give trouble; therefore, before putting in the dark

CENTRO ARTISTICO FOTOGRAFICO

(ARTISTIC PHOTOGRAPHIC CENTRE)

VILLALOBOS N.° 12, QUIAPO

It is now offered to the Public the new Instalment of the Artistic Pothographic Centro, duly authorized by its original owner, with the most perfectionate proceedings which up to the present the monst well known intentors on this branch could have done, and reducing the prices at such rates that any one, even a poor man, is able to get photographed.

With the object of keeping everyone satisfieed, photographs wil be taken from 7 o'clock in the morning until 5 o'clock in the evening—inclusive of holydays—as well as on cloudy weather without suffering the least the usual satisfactory result.

The photagrapher is also willing to goto private residences or to the outskirts, at the option of the peoble previous agreement about prices, wohich will be, however, moderate.

The likenessese are all varnished witg a preparation known as porcelain.

The following is the Price List by which you will get convinced that there is no possible competition payin advance.

NAMES OF CABDS.	Sizes	For 2 copies	For 6 copies	For 12 copies
Mignon	$2^{1}\|_{2}$ by $1^{3}\|_{4}$ inches	$ 0'80	$ 1'75	$ 3'00
Visit	4 ,, $2^{1}\|_{2}$,,	,, 1'00	,, 2'00	,, 3'50
American	$6^{1}\|_{2}$,, $4^{1}\|_{4}$,,	,, 2'00	,, 4'00	,, 7'00
Boudoir	$7^{6}\|_{8}$,, $5^{1}\|_{4}$,,	,, 3'00	,, 6'00	,, 10'00
Saloon	10 ,, $6^{7}\|_{8}$,,	,, 5'00	,, 10'00	,, 16'00
Quart Sheet	$12^{6}\|_{8}$,, $9^{7}\|_{8}$,,	,, 7'00	,, 16'00	,, 24'00

NOTE.—For *bust* likeness, one quarter of the above prices is to be added, as for *groups* there will be also an addition of the fourth part of the above prices for each person.

ARTISTIC POHTOGRAPHIC CENTRE

slide, it is advisable to paint over these parts (or all the foreground if you like) with an opaque water-color. It can easily be washed off again.

The above is also a capital method when making a transparency for an enlarged negative, and afterward it can be put in an ornamental frame and hung in a window.—*Photographic News*.

W. E. DAW.

HOW TO BUILD A STUDIO SUITABLE FOR AN AMATEUR.

SECOND-PRIZE ARTICLE.

This shows my plan for an amateur studio. The following is the bill of lumber:

1,064 feet of hemlock boards, 12 inches wide, planed both sides, at $22 per M.	$23.40
324 feet of 2 by 4s, planed all around, at $20 per M.	6.40
110 lineal feet of 4 by 4, at $20 per M.	3.00
384 feet of flooring (hemlock), at $18 per M	6.93
160 feet of ⅜-inch ceiling, at $18 per M.	2.88
3 chestnut posts, 8 feet long, at 25 cents each	.75
80 feet of battening, at ⅔ cent per foot.	.53
2 rolls of tar paper, at $1.10 per roll	2.20
1 window, 2 feet 6 inches by 4 feet, at $1.20	1.20
1 sash (ruby light), 1 by 2 feet	.75
1 sash, 4 by 5 feet (double-thick glass)	4.00
1 sash, 5 by 7 feet (double-thick glass)	6.00
Hardware, such as nails, latches, hinges, locks, etc.	2.00
Painting (the outside, two coats)	8.00
	$68.04
A carpenter's wages for one week, at $2.25 per day	13.50
	$81.54

The chestnut posts are cut up into 2-foot lengths and driven into the ground about 18 inches, and are 8 feet apart. The 4 by 4 are to rest on them.

The hemlock boards are used in the side walls and roof.

The 2 by 4s and 4 by 4s are used in the framework.

The ceiling is used to line the inside of the operating room and office.

In Fig. 1 we see the general arrangement of the joists and the 4 by 4 to which they are nailed, being 2 feet apart and 16 feet long. The ends are squared off. A shows a joint of the largest beam. The two pieces are nailed together from both sides to make it doubly secure. B shows the end joint which is fastened in the same manner. Fig. 1*a* is a sectional view of the above plan. C in Fig. 1 is the doorway, which is 2 feet 6 inches wide. D and E are the windows and F is the north light.

In Fig. 2 we see the side with the north light as it will be when finished. The dotted lines show the framework of the studio, which is made of the planed 2 by 4s. A is the north light, and it consists of a side light 4 feet high by 5 feet wide, and a top light 5 feet wide by 7 feet long, about which more will be said later on. B is the door, 2 feet 6 inches wide by 5 feet 6 inches high, and is fastened on with two strap hinges. It also has a latch and a lock on it. The studs marked C are cut 6 feet long. The one D is in two sections, each section being 12 feet long, and is fastened together the same as A in Fig. 1. Those marked E are cut to fit in between *c*, *c*. F is 2 feet long and helps to hold the large sash of the north light in place. G is a board 12 inches wide that goes all around the studio to put a finish to it. The boards used in the side walls are cut into 7-foot lengths and nailed on to the framework shown by the dotted lines.

In Fig. 3 we see the east end of the gallery from the outside. It has two windows in it — one a ruby window, B, used to light the darkroom, and the other, A, to light the waiting-room, office and toilet-room. C is a ventilator for the darkroom, built as described in the plan. D, is a chimney-pipe four feet high from the roof. For winter use, the stove is in the operating-room. From E to E, Fig. 3, is 10 feet long, the length of the roof boards. F, a dotted line, illustrates the roof plan. The other dotted lines are the framework. G is a board 12 inches wide that answers the same purpose as in Fig. 2.

Fig. 4 illustrates the roof with the skylight in it, which is 5 by 7 feet. A is a 2 by 4 used in the side wall and to which the roof boards are nailed. B is the ridge pole, it being 25 feet long, and jointed the same way as A in Fig. 1.

SCALE: 8 Ft. to the Inch.

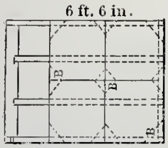


Fig. 6a.

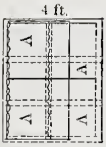


Fig. 6.

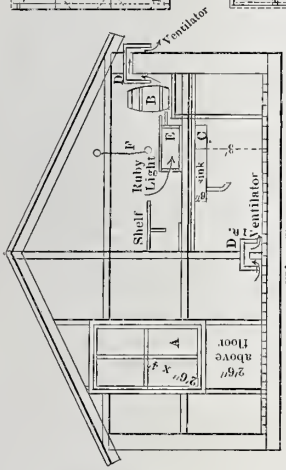


Fig. 7.

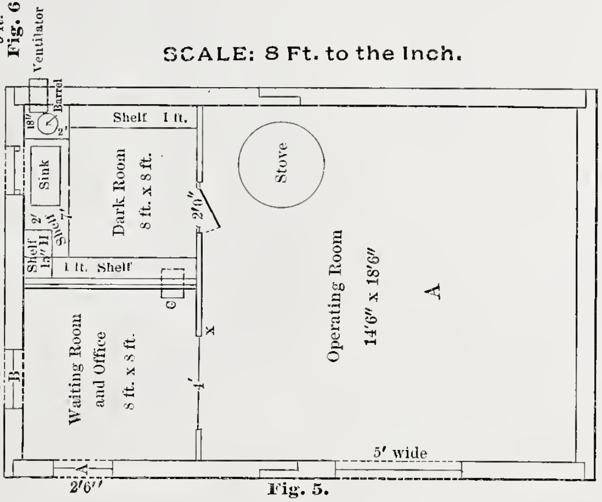


Fig. 5.

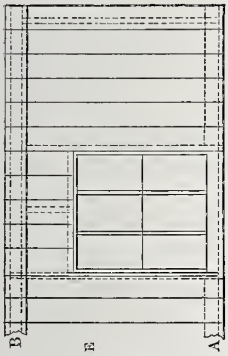


Fig. 4.

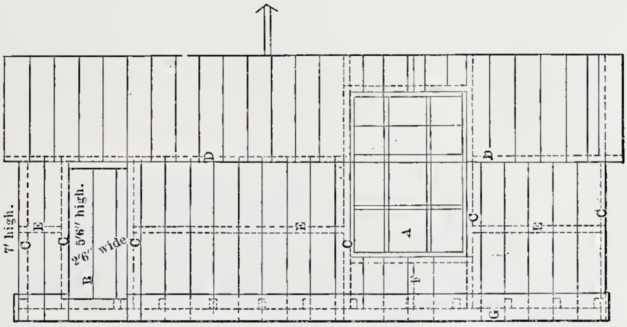


Fig. 2.

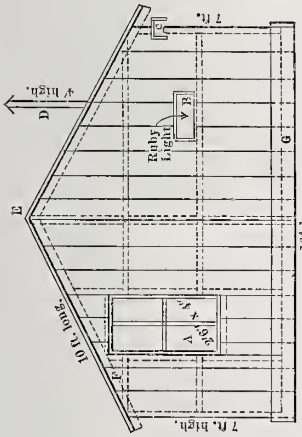


Fig. 3.

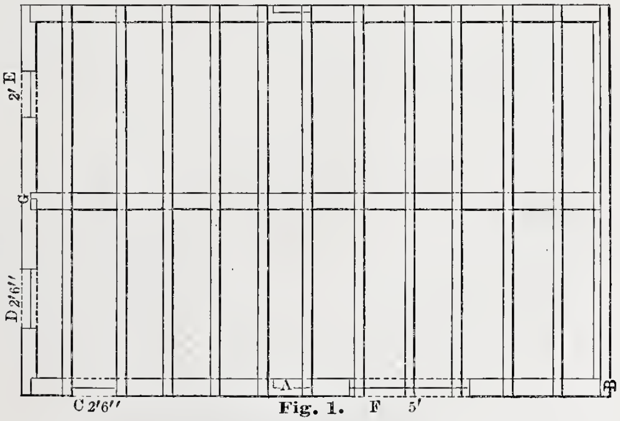


Fig. 1.

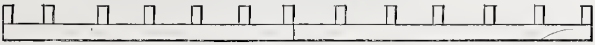


Fig. 1a

In Fig. 5 we see the general arrangement of the interior, which consists of three rooms — an operating room, an office, waiting or toilet room, and a darkroom. The walls marked X are 2 inches thick and made by nailing ⅜-inch ceiling to the framework from the floor to the ceiling.

The operating room is 15 feet 6 inches wide by 18 feet 6 inches long, the north light being 4 feet 9 inches from the west wall. S is where the stove is to be placed in winter to heat the studio. The printing can be done by the north light or, if the operating room is too large, a partition can be put up at an extra cost, and a long window put in on the south side of the studio. The office has a door opening on the outside marked A, and a window also, marked B. It could have a table or a wash-stand placed near the ventilator, C, to protect it.

The doorway between the office and operating room, which is 4 feet wide, could have thick curtains placed in it and would give the place a stylish look. The office is 7 feet square on the inside.

The darkroom is 7 by 7 feet and it has two shelves 12 inches wide and 3 feet from the floor, and one 2 feet wide with a wooden sink in it, 3 feet from the floor. The sink is 1 by 2 feet and 6 inches deep. H is a shelf 2 feet above it, to be used for the developer, etc.

Fig. 7 shows the interior arrangement of the office and the darkroom. The window A is 2½ feet above the floor and reaches to the roof. B is a water barrel with a wooden or iron faucet on it. If not supplied with city water, you can, by having a tin roof, get your supply from your own roof, and save carrying the water to fill the large barrel. The sink, C, has a drainage pipe which goes through the outer wall and empties into a barrel put into the ground and filled with stones. The barrel has the bottom knocked out of it. The ruby window E is on hinges and can be opened from the inside by a chain or a strong cord, marked F in Fig. 7.

In Fig. 6 and 6*a* we see the arrangement of the curtains, which are hung on wires stretched across the window. The curtains A A are 3 feet long and 2 feet wide, being made of some cheap and dark cloth. The screens in Fig. 6*a* are made of ⅞-inch square strips nailed together and braced as is shown at B. Each screen is 2 feet 6 inches wide by 2½ feet long, and is covered with white cloth, it being tacked to the above frames, which are hung on wires that reach from one end of the operating room to the other.

By following the above directions closely, I think an intelligent man, with the aid of a carpenter, can erect the studio at the very low cost of $81.54.

VINCENT J. RAWLINSON,
509 Willow avenue, Ithaca, N. Y.

COPYING PHOTOGRAPHS.

THIRD-PRIZE ARTICLE.

In copying a photograph first pin or clamp the picture to be copied on the wall or an upright frame, where its surface can be made to lie perfectly flat and smooth. It should be hung or placed where a strong light will fall on it, but not sunlight. A window facing the north is best suited for this. Place the picture near the window, not directly facing it, but to one side, and partly facing it so as to get a strong light on it.

The camera should be placed directly in front of the photograph to be copied. The lens should be the same height as the center of the picture. Great care should be taken that the camera is squarely in front of the picture, that is so that the ground glass is exactly parallel to the picture you are going to copy. Be very careful of this, or the negative will be distorted. No true picture can be made unless you pay particular attention to having the ground glass and picture to be copied exactly parallel and the lens point exactly to the center of the picture to be copied.

A slow plate is best for copying. I prefer an iso, or orthochromatic plate. In the winter a fast plate is preferable.

In copying, if the copy is to be large or small, the camera will have to be placed close or at some distance from the picture you are going to copy. I take a piece of cardboard large enough

Neg. by A. P. Pierce, East Otto, N. Y.

BEGINNERS' COMPETITION.

(SECOND PRIZE.)

to fit in the frame that holds the ground glass and lay out with a lead-pencil in the center the size of picture I wish to make; then with a knife I cut out the centerpiece, which leaves a hole the size I wish my picture to be. I then place the cardboard with the hole cut in it against the ground glass, and focus till the image on the ground glass of the picture I am going to copy just fills the open space in the cardboard. The ground glass can be marked with a lead-pencil the size you wish to have your picture, but is not so convenient as the cardboard. The camera should be moved nearer to the picture or farther away till it just exactly fills the aperture cut out of the cardboard placed against the ground glass.

Be very sure to get a sharp focus on the picture you are going to copy. If you can not see it very plain place a piece of newspaper against the picture and focus on the letters; use a reading or magnifying glass to examine the image on the ground glass if necessary.

An *f* 32 stop is a very good size to use in copying. The time will vary from one to five minutes according to the picture you are going to copy. A dark one will require more time than a light one. Be very careful not to jar the camera while making the

Neg. by E. T. Rickard. Homer, Ill.

ANYTHING IN MY LINE TODAY?

exposure. Burnished photographs or those having a high polish are very hard to photograph, as they reflect light. So be very careful to have the light so arranged that no part of the polished surface will reflect light into the camera.

A very good way to copy photographs is by flashlight. Focus on a candle flame placed just where the center of the picture you are going to copy will be. When through focusing remove the candle and hang up the photograph with its center just where the candle flame was. Use an *f* 16 stop and about ten or fifteen grains of flash powder. Keep the flash lamp just above and back of the camera. Use the fastest iso or ortho plates. In using flashlight in making the exposure you are almost sure of the proper exposure. The flash powder will not cost as much as the plates wasted in getting the proper time of exposure by daylight.

W. MARSHALL,
24 South Porter street,
Elgin, Illinois.

When you want a book on any special photographic subject apply to us, for we carry in stock every book published in England on photography. One hundred and fifty different titles.
THE PHOTO-BEACON CO., Chicago.

INTERIORS.

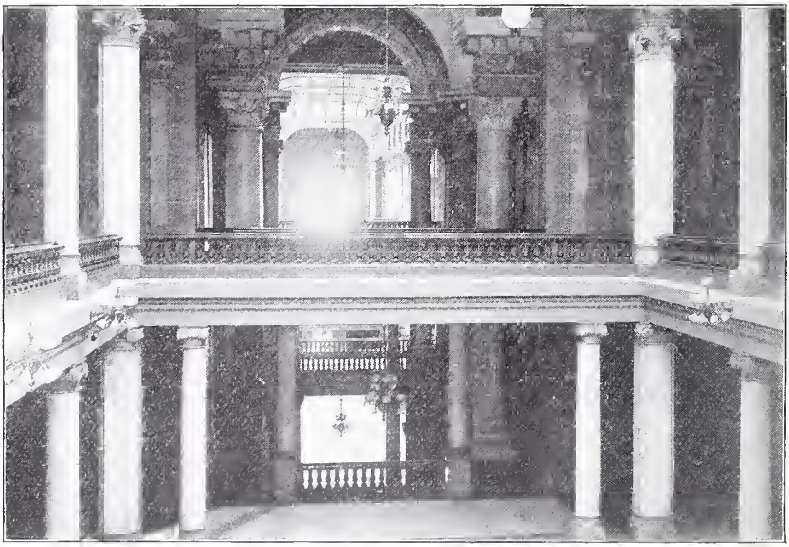
(SECOND-PRIZE ARTICLE.)

Interiors are often neglected by the amateur, on account of the fancied difficulties attending a long exposure.

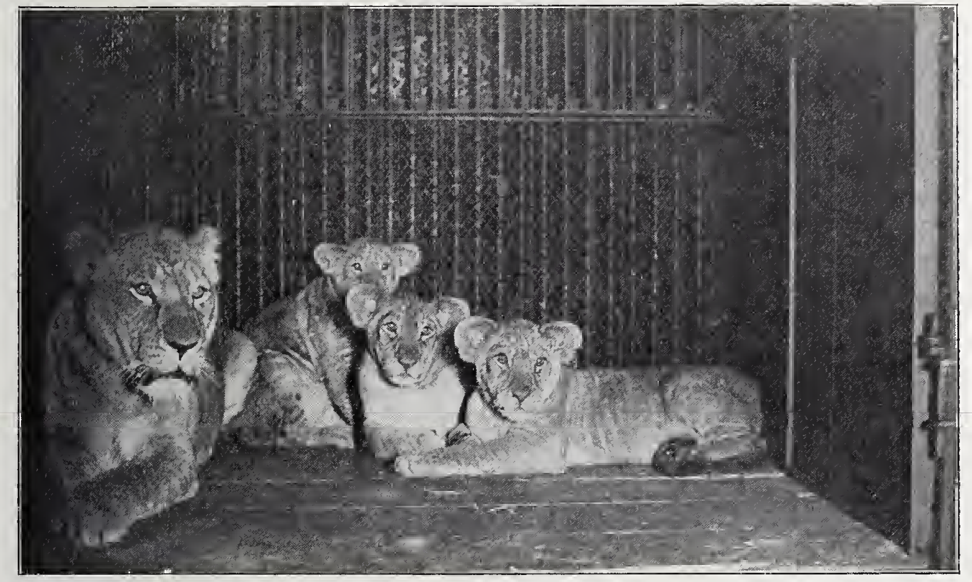
The lens should be what is called a "wide-angle," so as to take in as much as possible of the interior. It ought to show three sides of the room. If you have not got a "wide-angle" an ordinary lens will take just as good a picture, but will not include as much.

Select a bright day, so as to give the greatest quantity of light in the room as possible. Take care that the light does not shine directly into the lens. If a window comes in the view, hang some dark cloth inside the window frame; when the exposure is nearly complete cap the lens, then remove the cloth from the window and expose for a few seconds; this will give the window the proper exposure. If the window was not covered by a dark cloth it would be over-exposed, and would only be a blur on the finished picture.

In focusing use a piece of newspaper or a piece of lace laid at the proper distance, or where you wish to have the interior show the plainest, focus on this.



Negative by W. Marshall, Elgin, Ill.



Negative and copyright, 1898, by F. M. Woodruff, Chicago, Ill.

A QUIET FAMILY.

Negative by Geo. M. Crowe, Landscape Class. Los Angeles, Cal.

THE OLD HOMESTEAD.

(First Prize.)

Use a small stop, so as to get details and depth of focus.

Use a fast plate, for the time of exposure will be long in any case. Do not be afraid of over-exposure, as it is hardly likely to occur. A well-lighted room will require a half hour ; a dimly lighted one, two or three hours.

Remove or partly cover any polished surfaces, such as chairs or tables, so they will not reflect light into the lens.

If, in photographing an interior, you wish to take a view toward an open window, showing not only the interior but also the landscape without, a double exposure is the best way to accomplish this. Expose by daylight for the landscape and windows. First focus on the interior with the largest stop. Then using a small stop expose for the landscape. Now cap the lens and leave the camera in the same position till dark ; do not move anything in the room, nor disturb the curtains. Use the largest stop, and give the second exposure by flashlight.

Interiors can be taken by flashlight very easily. Focus on a candle or lamp flame, where you want the focus sharpest. Have the room well lighted by lamps or gaslight, but so placed that the light will not shine into the camera ; the object of the lights are to absorb the shadows which will be cast by the flashlight. Persons can be seated in the room, which will add to the picture. Use the most rapid plates and large stop. Iso or ortho chromatic plates are best for flashlights.

The picture inclosed is an interior view of the State capitol at Indianapolis, Indiana. It was given an exposure of twenty minutes with a 16 stop, on a Cramer isochromatic medium plate.

W. MARSHALL,
24 S. Porter street, Elgin, Illinois.

ALAMEDA, CAL., December 21, 1899.

DEAR SIRS,—I received your "Exposure Tables" some time ago, and have timed my exposures by them. The pictures I have taken have all turned out excellent, and I am highly pleased.

Yours truly, W. HESSE.

POSITIVES DIRECT IN THE CAMERA: A NEW METHOD.

In the paper which I read in May of this year at the Photographic Congress at Florence, on "Progress in Photochemistry," I described some recent experimental researches which I had made in that field. Among other subjects dealt with was the employment of a solution of potassium permanganate with sulphuric acid to reduce negatives or to obtain positives direct. I exhibited some instantaneous photographs in which direct positives had been obtained by this method. In the present article I wish to draw the attention of my readers to the utility of this method of reduction, and to further experiments which fully confirm all that I stated in the paper at the Congress.

The combination of sulphuric acid and potassium permanganate has the remarkable property of reducing the image in the negative in the more opaque portions first, only attacking the half-tones and the feebler parts later. By its use the harshest negatives can be modified to a remarkable extent, the action of the solution closely resembling that of ammonium persulphate, with the advantage that the subsequent treatment with sulphite necessary in the case of ammonium persulphate is done away with. It also possesses the desirable feature that the solution is extremely cheap, and is composed of material which can be obtained at any chemist's and which is not subject to alteration upon being kept.

The formula I recommend is as follows :

Potassium permanganate...	½	gramme.
Commercial sulphuric acid..	1	cc.
Ordinary water	1,000	cc.

The solution keeps very well, and can be used with negatives from which the hypo has not been entirely eliminated, because it oxidizes any traces of the salt which may be left in the film. The solution is poured on the negative and the dish rocked during immersion. If the negative assumes a brown color, due to deposition of a little manganese dioxide formed by the decomposition of the permanganate, it is only necessary to dip

Negative by Geo. E. Sanborn, Norwood, Mass.

ACCIDENTAL COMPETITION.

(Third Prize.)

Negative by Mrs. Flora J. Glazier, Essex, Mont.

ACCIDENTAL COMPETITION.

(First Prize.)

it for a few moments in a one-half to one per cent solution of oxalic acid to get rid of it.

Messrs. Lumière explained the action of ammonium persulphate (which is alleged to act upon the densest portions of the image before attacking the weaker parts) by the deposition of silver in those parts of the image which are nearest the surface, because the persulphate there is in excess. Consequently the action in such parts is the direct opposite of that which takes place where the persulphate is not in excess. I have already shown that this theory is untenable. It is not the case that persulphate acting upon silver nitrate produces a precipitate of reduced silver, and I have shown that the black precipitate is always composed of a subsulphate of silver completely soluble in hyposulphite, and never of metallic silver. Further, I have shown that an ammoniacal solution of persulphate acts as a reducer just as a neutral solution does, but more slowly. Now, an ammoniacal solution gives no precipitate of reduction products with silver nitrate. Messrs. Lumière have replied, but have not taken into consideration these facts, which seem to me most important.

With reference to the other arguments against the theory put forward by Messrs. Lumière, I would draw attention to the action of the acid solution of potassium permanganate, which acts in a manner analogous to ammonium persulphate. In this instance we can not have recourse to the explanation based on the precipitation of silver, because this solution can under no circumstances reduce silver salts.

Leaving the theory and returning to practical details, I would point out that the employment of a solution of potassium permanganate acidified with sulphuric acid answers excellently for obtaining positives direct in the camera,

Negative by Chester M. Whitney, Westminster, Mass.

DESERTED.

(SECOND PRIZE, LANDSCAPE COMPETITION.)

the method being a most certain one. The following are the working details: The plate employed should be by preference not a very rapid one, and should be fully exposed. It is developed with a hydroquinone developer containing at least seven grammes of potassium bromide to the liter. Development must be pushed as far as possible without giving rise to fog. The plate is then rinsed in water and placed in the acidified permanganate solution, which ought to be twice as strong as that used in the usual way for reducing. In this bath the silver forming the image rapidly dissolves, and the plate takes a brownish tint in consequence of manganese dioxide being deposited. This can be removed by treatment with oxalic acid, as already pointed out. These operations (subsequent to development) can be performed in daylight. In this way a positive, in which the image is composed of silver bromide, is obtained, and this must be blackened by means of development. This is not easy to do, although it is generally regarded as of little importance. The silver bromide after treatment to dissolve the reduced silver does not respond readily to the action of the developer. I have succeeded, however, in getting over this difficulty by employing a solution of metol with caustic alkali, the following being the bath which answers well in my hands:

Metol	10 grams
Sodium sulphite	20 grams
Potassium hydrate	10 grams
Water	1,000 cc.

Development in this solution can be done in daylight. It takes place very rapidly, and yields a good, black color. When necessary, a little formalin can be added to prevent frilling.

PROFESSOR NAMIAS.

A. C. NOVESS has been appointed secretary of the Michigan Photographers' Association. Any correspondence pertaining to the office should be addressed to him at Mount Clemens, Michigan.

Negative by E. F. Reese, Cherokee, Iowa.

THIRD PRIZE.

(BEGINNERS' COMPETITION.)

LETTERS TO THE EDITOR.

January 5, 1900.

Dear Mr. Todd,— Your letter came to hand and fully noted. When I sent you that batch of prints, I told you to let me down easy, but you hit right from the shoulder and knocked me out. I had almost thought myself a "Past Grand" in landscape photography. Your letter, I guess, is correct. I am a beggar in the elements of art. What hurts me most is that I have been so long in finding it out. "What fools these mortals be," and the biggest of all is an old fool. Fancy me trotting around taking pictures until I have a trunk full of negatives — not one of which can show any more trace of art than an old sock; but that is experience — and that comes high. You give me just a little bit of encouragement by telling me to read Mr. So-and-So's articles as they appear in The Photo-Beacon through 1900. Todd, that's a mighty long time to study up on this single branch. Didn't you know I was going to Scotland and Paris in May? I want, of course, to take some pictures, but what's the use if I can't get just a little bit of artistic composition in them? Why didn't you suggest one of your books? I presume you are too modest for that. Haven't you got anything that reads something like this: "Artistic Photography (in a nutshell), both Landscape and Portraits"? If you have, send it along, and I will remit the price.

With kind regards, I am yours sincerely, J. E. P.

[We started him with Robinson's "Pictorial Effect in Photography." But there are thousands just like our correspondent, who are living in a photographic fool's paradise.— Ed.]

St. Mary's, Ohio, January 8, 1900.

Photo-Beacon Company, Chicago, Ill.:

Gentlemen,— After reading prize article on "Amateur Photo Gallery," I must say I am sadly disappointed. You surely do not advise any one to attempt to construct a gallery on this flimsy plan. Rafters, 2 by 4, 9 feet long, placed 3 feet centers, only one cross-tie or brace. Where would this roof be after a heavy snow fall? Floor joists, 2 by 6, 14 feet long, no center support — not even bridged. Don't you think the floor would be a little springy?

How about artistic lighting in a gallery with light two feet from back wall?

As to cost — ask any dealer what kind of door and two-pair window sash, glazed, he would furnish for $3. The roof would not last six months if put on as specified; it would have to be covered with cement to make it last; this would double the cost; skylight would cost double, etc. You must certainly have had a professional photographer, who disliked amateurs, for a judge.

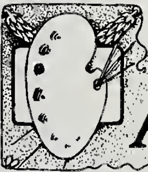
I certainly would advise persons intending to build to let this prize plan alone, and not waste their money. Sincerely, S. Gardner.

[Not being a practical carpenter, we have done what we could in selecting the best of what was submitted to us. We will be glad to hear from others on this very important question. We also send copy of letter to Mr. Nelson.]

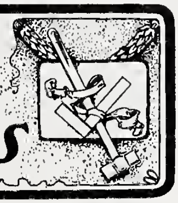
EDITORIAL TABLE.

A little too late for notice in the January issue there came to hand *Mosaics*, the oldest of our photographic annuals. We have read it through with much interest and profit, and have no doubt but that such of our readers as did the same are like-minded. Published by E. L. Wilson, 289 Fourth avenue, New York. Price, 50 cents.

The Blair Camera Company, of Rochester, New York, are offering a number of new designs in camera construction for this season. The 4 by 5 Weno Hawkeye, which retails for $8, deserves special mention, as it is without doubt the smallest non-folding daylight loading film camera in existence for 4 by 5 photos. There are no removable parts, which is an advantage to be considered, and owing to the beautiful finish and moderate price, it must prove a winner.



Home Hobbies, Arts and Crafts



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CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER, B.A.,

INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

INTRODUCTION.

Now that Christmas is over and so many bright boys have received either tool-chests, or, what is better yet, partial sets of first-class tools, expecting that as they need more the proper tools will be forthcoming, the question comes to their minds, as well as to the minds of the parents, "What can be made?" We still have long evenings before us, and much work can be done now as well as during the long summer vacation.

It will be the aim of this department to suggest proper tools and how to use and care for them, also what to make and how to make it. Questions and correspondence on difficult points are invited from our readers. Prizes will be offered for the best solution of certain problems and methods of work, and in a great variety of ways we wish to make this feature helpful, not only to the boy, but to his sister and possibly his parents.

We will start with tools and woodwork first, for two reasons: (1) So many schools, both public and private, are teaching constructive work in one form or another. (2) Many of our readers have new tools all ready to be used.

Perhaps there may be some cases where there are no new tools, but the parents or friends would be glad to supply them if they knew just what tools to get and if the boy could be told what to do with them. With that in view we will submit a list of tools that should cover all general needs and can be bought for $5.

The conductors of this department will be glad to give a list of dealers who will supply them at that price if there be any difficulty in getting them at home.

LIST OF TOOLS.

One 10-inch Bishop back-saw.
" 6-inch Stanley try-square.
" No. 100 Griffin coping-saw, with 12 extra blades.
" No. 3 Atha claw-hammer.
" 14-inch wood jack-plane.
" ¼-inch Buck Bros. chisel.
" ¾-inch " " "
" four-fold, two-foot rule.
" chip-carving knife.
" ¼-inch No. 3 flat gouge, handled and sharpened.
" No. 9½ block plane, Stanley's.
" ¼-inch Dowel bit.
" ½ " " "
" Swan auger handle.
" 6-inch cabinet file, half round.
" No. 24 India oilstone, medium.

Before commencing work it will be necessary to have some sort of a bench to work on. We show working drawings of one so simple that any one can make it and which will answer every purpose.

DIRECTIONS FOR MAKING THE WORK-BENCH.

Cut four pieces of 2 by 4 inch scantling for the legs, each 28 inches long, and plane them down to 1¾ by 3¾ inches. Next cut two pieces "A," each of ⅞-inch thick stock, 7 inches wide and 24 inches long, and nail with five nails to the 1¾-inch face of the legs, and flush or even with the ends, taking great care that the top edge of "A" forms a right angle or is "square" with the legs. In like manner prepare the brace near the bottom of legs, which should be ⅞ by 4 by 24 inches long, and should be nailed about three inches from the bottom end of the legs; thus we have two parts like this :

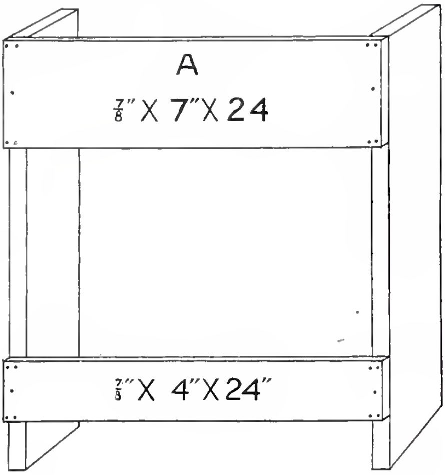

FIG. 1.

These must be fastened together with similar ties running across the front and back. The upper one should be ⅞ by 7 by 48 inches long, and should project 4 inches on each end beyond the pieces "A" and again care must be taken to have it "square" with the legs. The lower ones are ⅞ by 4 by 41¾ inches long.

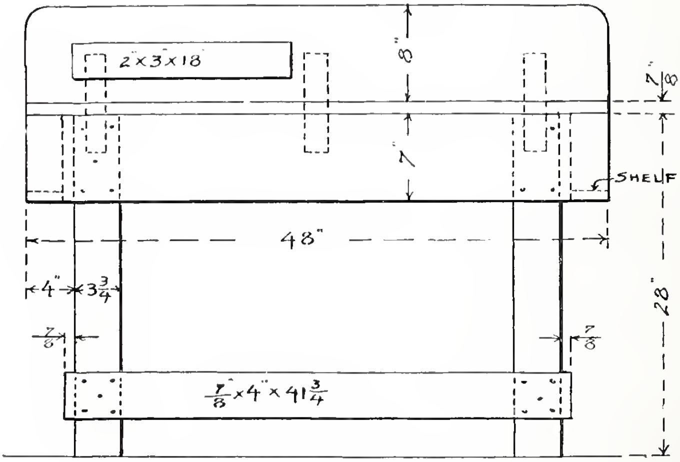

FIG. 2.—FRONT ELEVATION OF WORK-BENCH.

The top can be of ⅞ inch thick smooth boards, but would be better if they were 1¾ inches thick; or if some matched flooring is at hand, use it, as it will insure tight joints.

The top is to be nailed to the pieces "A." To do this a pencil line should be drawn on the top immediately above the center of the pieces "A," and the nails driven through this line will be sure to strike the center of "A." "Set" all the nails; that is, drive them down below the surface with a punch or nail-set.

The back-board can now be put on and held in position by cleats on the back, as is shown.

The tool-rack is for all the small tools, such as chisels, screw-driver, rule, knife, etc., which are to be slipped into holes of suitable size and shape. After using the tools get into the habit of placing them in the rack again; it is just as easy as to throw them down on the bench. The saws, hammer, bench-hook, brush with which to clean up the floor, and nearly everything else can be hung on nails or hooks at the ends of the bench.

A shelf can be put in at each end of the bench, level with the lower edge of "A," and wide enough to reach to the end of the front piece; the planes can be put at one end and cigar boxes with nails, screws, etc., on the other end shelf.

FOWLER'S TABLE BENCH OR BENCH-STOP.

This form of bench-stop or table top was designed for the use of a young man who had lost one arm and found it difficult to hold his work rigidly in place while using tools. He not only used it

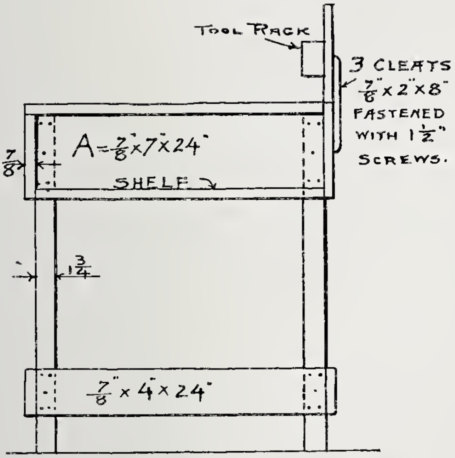

Fig. 3.—End Elevation of Work-bench.

for planing, but for carving and various other things. It seemed so thoroughly practical and to take the place of a vise in so many ways, that it was made by nearly every one in the school for use at home and applied to the top of the kitchen table in the absence of any other bench. It received the nick-name Fowler's vise. Two sets of stops were made, one set ⅞ of an inch thick, and the other ½ inch thick. Any work under ½ inch was blocked up by putting strips of thin wood under the work, raising it up to the proper height. It will hold any width of work, from 1/16 inch to 12 inches, and with it a cigar-box cover can be planed with ease. It will be found most excellent for all-round use, particularly planing, carving, pyrography, etc.

If preferred, the baseboard may be done away with and the holes bored into the bench direct; and we suggest that we can do without a vise for the present, and that this form of stop or clamp be placed on the bench instead of the baseboard, as indicated in the drawing.

DIRECTIONS FOR MAKING THE BENCH-STOP OR TABLE BENCH.

Procure some ⅞ inch stock, preferably hardwood, and cut the baseboard about three feet long and 14 inches wide, and bore ½-inch holes, as shown. Fasten cleats underneath on one end and one side so that it may hook on the corner of bench or table, and be prevented from sliding; these cleats should project downward about 1⅛ inches and may be fastened to the baseboard by means of glue and dowels or screws.

If we put the stop on the bench direct,

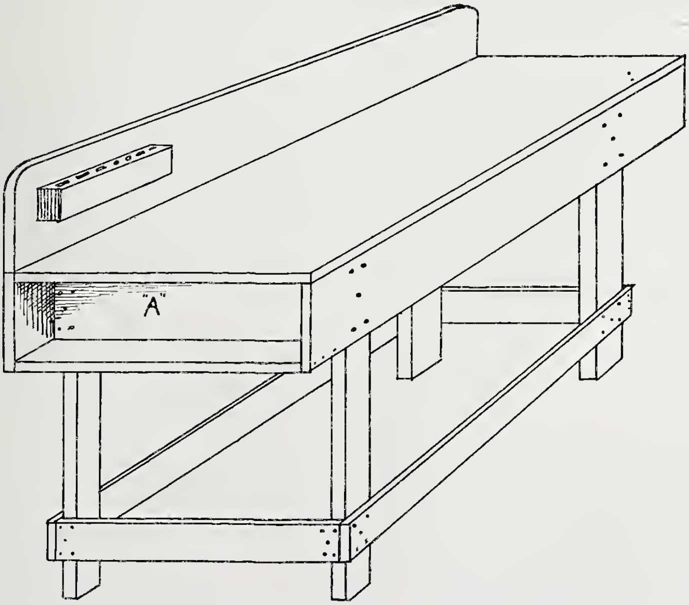

Fig. 4.—The Bench Complete.

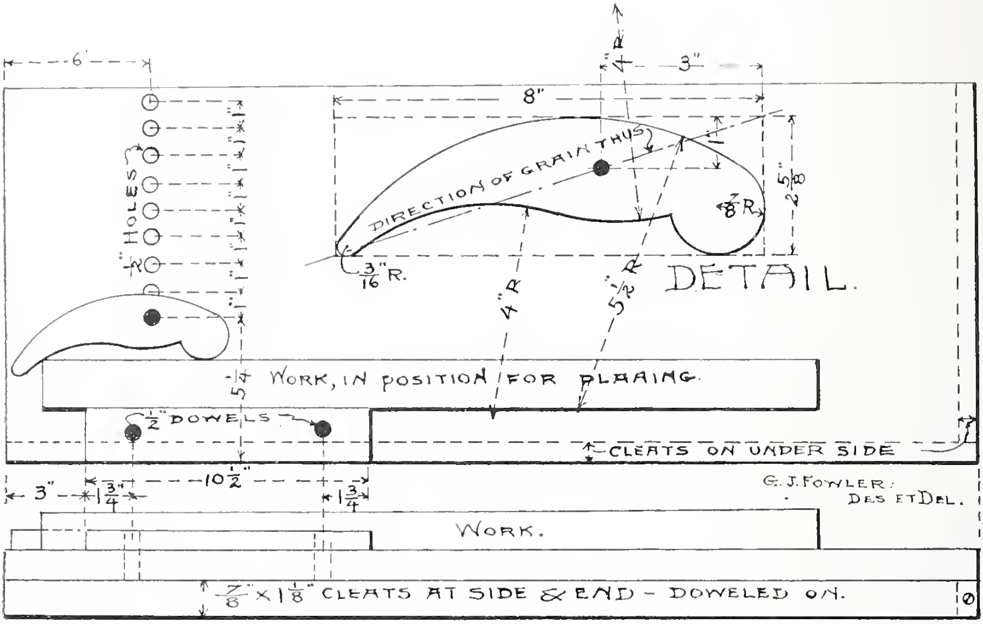

FIG. 5.—FOWLER'S TABLE BENCH.

it will save the work of doing this and we can proceed to cut the small rectangular piece and bore holes to correspond to those in baseboard or bench. Fit pieces of ½-inch dowels, which should be glued into small piece and fit neatly into baseboard. The holes, it will be noticed, are not in the center of the small piece, in order to accommodate different widths of material by turning the piece end for end when necessary.

The small clamping-piece should be next sawed out and filed smooth, care being taken to have the grain of the wood on a line from the hole to the small end, as shown by the dot-and-dash line; this will add greatly to the strength and also gives less friction against work.

It need hardly be necessary to tell how to use the device, as its very shape will show us that if we should put a piece of work in place as shown on the drawing and tap it with a mallet or hammer, it would be necessary to tap the other end to remove it.

A mallet or wooden hammer is often useful, as it is less liable to mar our work; it can easily be made from an old croquet mallet.

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL,
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of THE PHOTO-BEACON COMPANY.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

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Negative by M. S. Lovell, Oswego, N. Y.

A QUIET NOOK.

(First Prize.)

THE
PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. MARCH, 1900. NO. 3.

AS OTHERS SEE SOME OF US.

Our comments in December PHOTO-BEACON on the specimens of portraiture in "Photograms of '99" calls forth the following editorial by the editor of *Photography:* "It is first-rate and we would like to see a second dose of the same medicine administered, for it strengthens the position we have held for some time that the portraiture produced by the 'high'-art amateur in the East, and which he exhibits all over the world as examples of American ideals, is nothing but freak-art. We say it again, the real artistic portrait work in America today is made by the professional."

AMERICAN PORTRAITURE.

An exhibit from the United States at this year's Salon provoked very general comment as to its strength in examples of portraiture. We ourselves drew attention to it at the time, and in a notice of one of the annuals recently we promised to recur to the subject. We do so now, and we trust that the few remarks we have to make will be taken to heart by our friends across the water. We write in a condition of admiration for some of its features, coupled with a certain amount of dissatisfaction.

Our complaint against the pictorial portraiture exhibited from America is mainly based on our belief that, beautiful as much of the work is, and suggestive of character in a way which no "usual thing" dare hope to approach, it is by no means in the truest sense of the word portraiture at all. All trace of likeness in many cases is gone.

The desire for originality is allowed to override every other consideration, and as a result we have portraits of quite harmless individuals, which, if faithful, would justify their immediate consignment to the gallows. In others the face and features are so subordinated to catchpenny tricks, if we may use the term without offense, that the catalogue is the only guide to the sex of the person depicted. We do not wish to be captious, but a portrait, we can not help feeling, should also give us some slight suggestion of the age of its subject, possibly in some cases even a hint as to the color or complexion. We have had friends treated by the new school whose portraits, we do not exaggerate, were barely recognizable.

As long as these are entitled merely "a portrait," "a citizen of the U. S.," or in some similar manner, we take no exception, and frankly admire them. We take them to be not portraits of the particular model before the camera, but rather speaking likenesses of persons whom Nature might produce in one of her capricious moods after a careful study of the photographs.

We firmly believe that unless the photographers in America to whose work we are referring pay more attention to vraisemblance than they have been doing, the school itself will speedily become extinct. This result we should regard as a calamity.

The basis of portraiture must be truth, and when truth has been sacrificed to an utterly false suggestion of other things, or what purports to be, such a work has no real lasting power whatever. We should like to see what the American workers to whom we have been referring could do after having studied the work of such men on this side as Crooke and Barnett. The class to which these latter belong seems quite unrepresented in the

States, the gap between the extremely modern school and the ordinary photographer being a big one and almost if not quite unoccupied.

We hope our object in making these remarks will not be misconstrued by more than a few among those to whom they are addressed. The slightest attempt at anything beyond fulsome adulation seems to arouse the bitterest feelings in the minds of some people, who regard criticism as a personal attack. We do not think, though, that this holds good of very many of the sincere workers; in fact, the capacity for absorbing and profiting by the opinions of others is seldom absent from the true artist. It is your charlatan and trickster who must always be taken at his own valuation, and whose reply to a candid critic takes the form of virulent and shrieking abuse, and we hope that few of this character are to be found in the ranks of those whose brilliant and original work we have been considering. —*Photography.*

REMOVAL NOTICE.

By the time this issue of the journal is in the hands of its readers, the firm of E. & H. T. Anthony & Co. will have removed to 122-124 Fifth avenue, New York, between Seventeenth and Eighteenth streets. This means that possibly the oldest photographic landmark — 591 Broadway — in New York, will disappear.

STRAUSS GALLERY BURNED.

The many friends of J. C. Strauss, St. Louis, will learn with great regret that his beautiful studio was totally destroyed by fire on the last night of January. The total cost of the building and furnishings was $80,000, and only the bare walls are left standing.

"Passe-partouts and How to Make Them," is the title of a little pamphlet just issued by George K. Hazlitt & Co., Chicago, which will be mailed upon receipt of stamp to any Amateur Photographer. This booklet, which is illustrated with half-tones and line drawings, tells not only the right way but the wrong way to make passe-partouts, and will be of value particularly to those who have had little or no experience in this form of mounting photographs.

NEW COVER CRITICISMS.

It was with no little interest that we sat down to tackle the three dozen letters that were received in response to our invitation to criticise the new cover. We fully anticipated that the majority would take full advantage of the suggestion to give hard knocks, and we were in no respect disappointed. For three solid hours we read them and had a real good time. Our only regret was that every reader of The Photo-Beacon was not looking over our shoulder so as to get the full benefit of the fun.

One feature of the whole competition was very pleasing, the exceedingly kind wishes for the health, success and happiness of the editor as an individual. Somehow or other we have come to feel of late years to be simply the head of a big family, and it would also seem as if the readers felt much the same way. Such a state of affairs makes life exceedingly pleasant for the editor and buoys him up with the ambition to give the readers more and more the very best he can get for them.

One competitor suggested that it would be a good idea to get the readers to design the cover for 1901. The proposition is accepted heartily, and so we offer $25 for the best suggestion of a cover-design for next year. Now we want it to be clearly understood we are not so much anxious to get a fine drawing from competitors as to get a bright original idea. The following are the conditions:

1. All matter to be delivered before October 1, 1900.

2. That the design be suggestive of photography.

3. It must be attractive — that is, when lying on a newsdealer's stand it must draw attention to itself.

4. Not more than two colors to be used in the design.

Play ball, please.

PRIZE ARTICLE.

One sunny morning a party of six beginners in the photographic art visited the beach. Each was armed with a camera, and all types were represented, from the finest folding camera to the patent twelve-shot magazine. After some promiscuous shooting, after the fashion of beginners, five of the six arranged themselves about a bill-board advertising a new brand of chicken food, and pointed the nozzles of their cameras over its top.

Behind them stretched the deep blue sea, which in the distance joined the sky above, with no visible horizon. Some distance from the shore, high on a rocky eminence, a picturesque lighthouse stood. Its keeper had evidently died during the night, for now, although nearly midday, its light still shone with undiminished brilliance, giving a Rembrandt lighting to the rocks below. The sixth member of the party, and companion to the young lady on the left, photographed the others. Not being the possessor of "The Photo-Beacon Exposure Tables," and being, as has been said, a beginner, he got away off on his exposure. The resulting picture is greatly under-exposed, and this, under-exposed as it is, with no detail in the faces, and with the clothes of the subjects simply white paper, Mr. Todd selected for the cover illustration of THE PHOTO-BEACON. We suppose we must put up with it for the remainder of

Negative by Dr. F. Detlefson, Chicago.

this year, but next year, Mr. Todd, please give us something better than a "soot and whitewash" cover.

E. C. DYMOND.

Libertyville, Ill.

PICTORIAL COMPETITION, NO. 21.

One hundred and seventy-eight prints were sent in for this competition and the judges report that while there were few really fine pictures, the average work was much the best that has passed through their hands. This is exceedingly encouraging, as it shows what rapid strides the amateurs have made during the past year in artistic photography and that our efforts in that direction have accomplished quite a good deal. During 1900 we hope to see still greater progress, especially as an outcome of Mr. Hodge's articles on "Artistic Landscape Photography," which we think will fill a big want in photographic circles.

We wish to say a word on two points. Nearly every competitor desires us to criticise his work, and many request us to return the prints. Now, when we explain to our readers that our day's mail frequently runs over one hundred letters, they can readily understand that they are asking something that is practically impossible. Such prints as possess merit we pass over to schools and similar institutions, where they are highly appreciated, and we think every individual will feel we make a good use of them.

There is still another reason why we feel criticism would be of little value, and it is this, that so few know anything of the rules of the game. It would be no help to criticise the literary composition of a man who is entirely ignorant of grammar, and similarly it would be no aid to criticise the photographs of one who is ignorant of the elementary rules of art.

Please learn the rules of the game. Very good books on the subject are "Pictorial Effect in Photography," price $1.75, and "Picture-Making by Photography," price $1.25, by H. P. Robinson.

The following are the awards:

First Prize.— M. S. Lovell, Oswego, New York.

Second Prize.— Leon L. Reed, 320 Turner street, Auburn, Maine.

Third Prize.— D. H. Wulzen, Jr., 404 Castro, San Francisco, California.

PARTICULARS OF WINNING PICTURES.

First Prize.— Made with the front combination of a wide-angle Darlot lens, No. 7 stop, and about a second's exposure. Date, August, 4:30 P.M. Sun shining, but a little haze. Developed with pyro. Printed on W. & C. Platinotype. Clouds printed in. Seed's 26 X plate.

Second Prize.— No data given.

Third Prize.— Taken late in June, early in the afternoon, on a Seed 26 X plate. Stop No. 8, exposure $\frac{1}{20}$ second. Goerz lens. Mr. Wulzen adds: "For the past year I have been using 'The Photo-Beacon Exposure Tables,' and find I can not get along without them."

PICTORIAL COMPETITIONS FOR 1900.

Competition No. 23.—Snow pictures. Closes March 31.

Competition No. 24.—Local intensification. Closes April 30.

Competition No. 25.— Pictures of children under seven years of age; not necessarily portraits. Closes May 31.

Competition No. 26.— Reduction. Closes June 30.

Competition No. 27.— Flower pictures. Closes July 31.

Competition No. 28.— Local reduction. Closes August 31.

Competition No. 29.—Genre pictures, or pictures that tell a story. Closes September 30.

Competition No. 30.—Reducing excessive contrasts in a negative. Closes October 31.

Competition No. 31.— Landscapes. Closes November 30.

Competition No. 32.—Ray-filter pictures. Closes December 31.

RULES.

1. In the purely pictorial competitions, Nos. 23, 25, 27, 29 and 31, there is no restriction as to the number of

pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or post-card should be sent us, giving full particulars of date, light, plate, stop and exposure given, also the printing process.

2. In the technical competitions, there should be sent, first, a print from the negative before work is begun upon it; second, another print showing the effect of the operations. Along with these should be sent a very brief description of the course of procedure.

NOTE.—Methods of performing the various operations are to be found fully described in Part II of "The Reference Book of Practical Photography." In No. 32, ray-filter competition, send one print made with ordinary plate, and one on color-sensitive plate with color screen.

3. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

PRIZES.

First.—Books to the value of $5.
Second.—Books to the value of $2.50.
Third.—Books to the value of $1.
To be selected from our catalogue.

LITERARY COMPETITION NO. 10.

The awards in this competition were made as follows:

First Prize — John C. Mahin, Riverside, California.

Second Prize — Oscar Von Engelin, 140 La Belle street, Dayton, Ohio.

Third Prize — W. Marshall, 24 South Porter street, Elgin, Illinois.

LITERARY COMPETITION NO. 11.

It was with some little trepidation we proceeded to open the envelopes containing the articles sent in for the January literary competition, as quite a number of our readers had suggested that a big mistake had been made in not setting a definite subject for our literary friends to wrestle with. But in half an hour after starting to read the manuscripts we felt rather jubilant, for as article after article was read it was usually marked "accepted," for the simple reason that almost one and all were of that practical nature that we like to see. It more than ever confirms us in the view that there are hundreds of people reading the journal regularly who could contribute lots of little practical pointers that thousands of others would gladly learn, and so we urge every one who does any one thing different from anybody else to tell us about it.

Remember the editor of THE PHOTO-BEACON is a buyer and a seller. He is open to buy the best in the market simply to resell it to others. He is not hunting after names, but goods, and he cares not who the individual is that writes him, but rather what his ideas are worth. So please one and all join hands, and help the editor make THE PHOTO-BEACON an even greater help than it has been.

First Prize — William Bullock, Cleveland, Ohio.

Accepted (not arranged in order of merit): Dr. W. H. Steele, J. C. Eby, J. E. Taggart, W. Marshall, Frank E. White, F. E. Foster, E. M. Miller, A. Denton Pratt, and J. C., Danville, Illinois.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

RULES.

1. Write on one side of the paper only.
2. Be brief, sending less than one thousand words, if possible.
3. Never mind style — use the smallest words you know.
4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.
5. Write your name and address at the end of the article.
6. Mark the envelope "Literary Competition."
7. Preference given to practical articles, that is, those that tell "how to do things."

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F. R. P. S.

CHAPTER III.

ON PERSPECTIVE AND ANGLE OF VIEW.

It is essential that the photographic art-student should possess a knowledge of the principles of both linear and aërial perspective, for although it may not be necessary for him to undergo a course of study in perspective drawing, his lens acting as draftsman, yet that useful tool will probably forthwith lead him into error should he remain in ignorance of the rudimentary laws of the subject. The necessary information can be obtained from any standard text-book ; it is beyond our province to go into the matter in detail. Briefly, perspective may be said to be the science which governs the faithful representation of solid objects upon a plane or flat surface. In all drawings in correct perspective there is an imaginary horizontal line the position of which is always at the height of the observer's eye, and on this line there is a point to which the eye is directed called the "point of sight"— or "the vanishing point." The apparent size of an object is regulated by its distance from the eye. If it be near to the observer it appears large ; if remote it appears small. We can practically illustrate what has been stated by a very simple diagram. (Fig. 6.) The subject is an avenue of trees. A A is the horizontal line, B the point of sight. The position of the horizontal line will have an all-important effect upon the picture ; and although it may be placed either high or low, due regard in assigning its position must always be had to the nature of the subject.

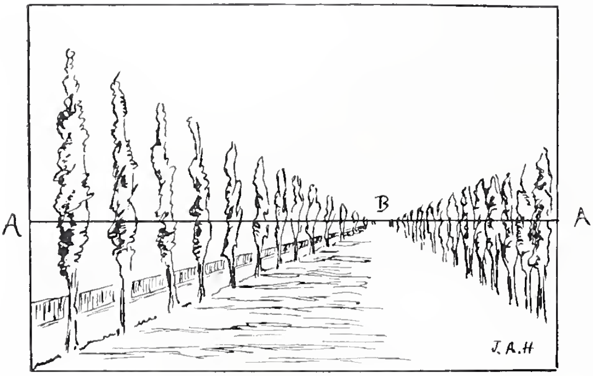

FIG. 6.

Fortunately for the photographer the perspective of the lens, whatever its form of construction, when used under proper conditions, is always mathematically correct. We are often told that this is not so, and certain photographs are referred to as illustrations of the exaggerated or untrue perspective produced by photography. Such photographs, although they may appear to be glaringly untrue, are in the majority of cases not really so, as we shall presently prove, and are generally the result of a misuse of the lens owing to the operator's ignorance of the laws of perspective.

The photograph of the man reclining in an armchair (Fig. 7) viewed in the ordinary way, strikes us as being grotesque in its violent foreshortening.

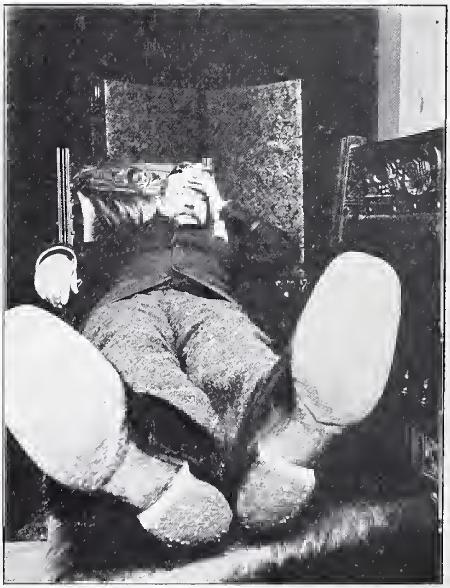

FIG. 7.

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* Copyright, 1900, by F. Dundas Todd.

The apparent disproportion between the size of the feet and the more remote parts of the body, is the result of using a lens of very short focus, which has rendered it necessary to place the camera too near to the subject. In this particular case the lens was but three feet from the sitter's shoes, and to prove that the exaggerated effect was only due to a misuse of the lens, and not to any inherent distortive tendency, we have but to close one eye and look at the subject from the same point at which the lens was placed, and though it may surprise us, we shall see precisely the same effect as that appearing in the photograph, the shoes appearing of Brobdingnagian proportions and apparently eclipsing everything else, thus proving that the exaggeration was not due to any defect of the lens, but merely to our misuse of it. Had a lens of at least twice the focal length been employed, we should have had to place the camera at a greater distance from the sitter and the immediate result would have been the production of a natural and normal effect.

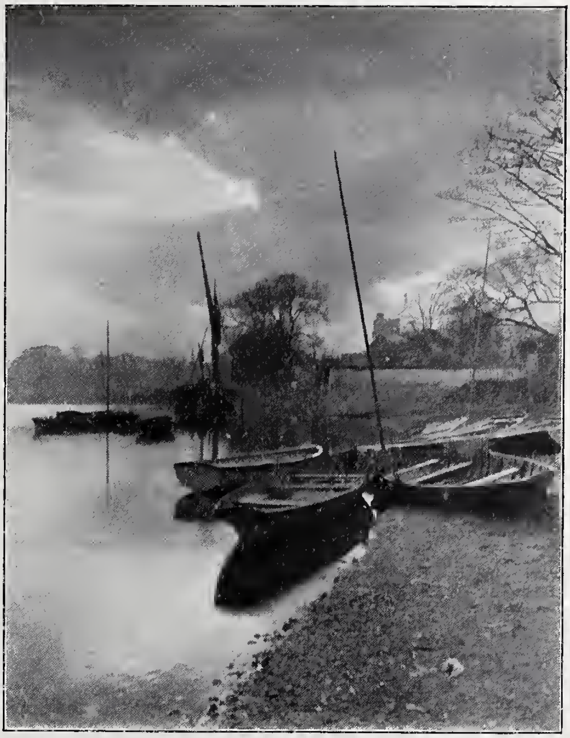


Fig. 8.

It is not going too far to say that the great majority of otherwise artistic and pictorial photographs suffer from the inclusion of too much subject-matter, the direct result of using lenses of too short a focal length. For this reason we have already advised the employment of lenses of long focus, i. e., of moderate angle. No rule as to the exact amount of angle to be included can be laid down. It must of necessity vary with the nature of the subject, and the manner in which it is desired to treat it; but the inclusion of any element in the composition which tends to lead away from the principal object, or motive, of the picture, can but have a weakening effect.

Perhaps this fact is more strikingly demonstrated when attempting to portray mountain scenery with the camera, than in any other class of subjects. Under ordinary conditions, i. e., using a lens with a focus of about one and a half times the length of the plate, the distant peaks which to the eye appear almost to pierce the very heavens, are represented upon the focusing screen as mere undulating foot-hills, while objects in the near foreground appear unduly large and out of proportion. The reason for this is that the lens includes a far wider angle than the human eye can, from a fixed point of view, possibly comprehend; and therefore the photograph appears to be untrue, although, as we have already shown, it is not really so.

A lens of longer focus, and (used upon the same plate) therefore narrower angle, will, by including less subject-matter, or, put in another way, by excluding the unnecessary subject-matter, give greater prominence to the principal object, and at once strengthen the picture, by representing the subject in the manner in which it ordinarily appears to the human eye.

To illustrate this point and to make my meaning clear, I have made three consecutive exposures upon the same subject, without moving the camera, but using respectively lenses of 5, 8 and 11 inches focus (Figs. 8, 9 and 10). These show, in a sufficiently striking manner, the *practical effect of the use of lenses giving wide, medium and narrow angles, respectively.*

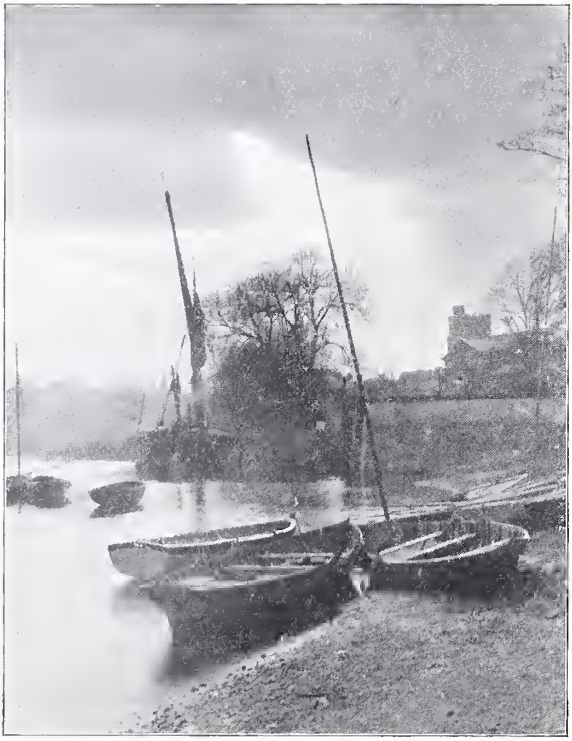


FIG 9.

Fig. 8 was taken with the 5-inch lens, which, although by no means giving what would be called a wide angle when used on a 3¼ by 4¼ plate, yet includes far too much of the subject to produce a really pictorial result, or, at any rate, to allow of the best being made of the subject-matter dealt with. By the inclusion of so much unnecessary detail, the foreground, which should be the strongest part of the picture, is weakened, and the group of boats forming the principal object lose the importance which their relation to the rest of the composition demands. Notice, also, the uniform and almost biting sharpness of all the planes, which has the effect of destroying aërial perspective, the presence of which in all landscape work is so essential to success. This defect (as it must be regarded from a pictorial point of view, though the optician would regard it as an advantage) is due to the property possessed by all short-focus lenses called depth of definition, which quality alone is one that makes it a less useful tool to the artistic photographer than one of longer focus would be. Finally, the inclusion of the tree on the extreme right, with its bare branches protruding, is not helpful to the composition, and would have been better omitted.

In Fig. 9, which was taken with an 8-inch lens, we note a marked improvement. There is a much smaller expanse of uninteresting foreground, and we have nearly succeeded in getting rid of the tree, though a few branches, apparently without support, still obtrude themselves into the view. The perspective effect is better, the various planes of the picture, foreground, middle distance and distance, appear in due relation to each other.

But in Fig. 10, taken with the 11-inch lens, we have what we venture to think will on all hands be admitted to be a far more pictorial rendering than either of its companions. Here foreground, middle distance and distance appear in due subordination to each other; by the narrowness of the angle, only just the amount of subject is included required for the best and most pictorial rendering of it, and by the means indicated we have succeeded in producing something different to an ordinary topographical photograph.

These three photographs afford a good illustration of the practical necessity of working with lenses of different focus. In this particular instance had I possessed only one lens, and that the 5-inch, I should have been compelled either to have put up with what I felt to be an unsatisfactory rendering of my subject, or have given up the attempt to secure it. My earnest advice to all who may find themselves in a similar dilemma would be to follow the last-named course, for it is always better to refrain from making an exposure if one feels that one's lens does not do justice to the subject.

I do not, however, wish it to be imagined that long-focus lenses are to be regarded as a panacea for all the artistic drawbacks and shortcomings of photography, or that their indiscriminate employment will necessarily infuse a pictorial quality into the photographs. Although improvement will probably result from their use in the majority of cases, the exercise of careful and well considered judgment will always be essential to success, and in forming that judgment the reader must be guided both by the nature of the subject and the particular rendering of it which he aims at producing.

PRACTICAL POINTERS FOR AMATEURS.

OR HOW TO "GET THERE" BY ONE WHO HAS "BEEN THERE."

An experience of fourteen years as an amateur has enabled me to acquire some pointers which have never appeared in print; others have.

No. 1.—For amateurs, what is the best size camera to get? A 4 by 5 with a good standard lens. Then you can enlarge your views to any size, or make slides direct. You can not do this with a poor lens. A larger size than this is expensive; a smaller is a toy. If your camera is long focus so much the better.

No. 2.—What is the best speed of plates? For snap-shot and flash-light use plates equal in speed to Cramer Crown, Seed 27, Hammer fastest, Eastman red label, Eastman film, Stanley 50. Better and slower plates for outside work (not snap-shot) are those equal in speed to Cramer Banner, Seed 26 X, Carbutt Eclipse, Excelsior, Climax Extra, Record, Stanley 35. These are not quite twice as slow as the others, but are about all alike as to speed. The Seed 23, or Non-halation, Crescent, Cramer Anchor and Hammer slowest are about alike as to speed and are about three times slower than the plates first named. These are for "still" views mostly.

No. 3.—How long must I expose the plate? See my article in December number of The Photo-Beacon.

With a marked shutter and a standard diaphragm system on your lens, the exposure tables now published will enable you to expose correctly for any hour, plate, subject, weather or time of the year. With a small, cheap camera it is mostly guesswork, two differently exposed plates on each view for the first few months will, however, enable you to get a few good negatives.

Fig. 10.

No. 4.—Where should the sun be

shining when I expose the plate? Not behind you, for you will not get enough shadow. When the sun is shining on the side C, the front B and corner A of a building, place the camera at corner D to take in front B, and shaded side F. Shaded side of building will then show dark against light sky and the shadows of the details in the illuminated front will be toward the camera contrasting with the high lights. (See Fig. 1.)

No. 5.—What is the best developer? Pyro is the best for the amateur, because the yellowish color of the negative from this developer gives upon the print everything visible upon the negative. Eiko, or hydro, will give a beautiful blue negative very desirable for lantern slides and transparencies, but has poor printing qualities, due to the actinic properties of the bluish color, which permits the passage of light in excessive quantities through those parts of the negative which are nearly opaque and which by their opacity form the highest lights in the print. A yellow opacity in a negative will not permit the smudging of the high lights by the passage of the blue rays present in all white light, but which easily passes through a bluish negative, producing a flat print. The advanced amateur knows how to offset this somewhat; others had better leave bluish negatives alone.

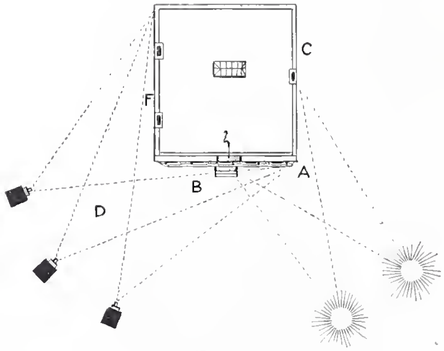


Fig. 1.

No. 6.—How do I know when the plate is sufficiently developed? If you have obtained a correct exposure, pour the developer (pyro) upon the plate, and count the seconds until the image begins to show upon the plate. If 30 seconds, multiply this by 6 = 3 minutes. The plate is then developed. If the image just starts in at 1 minute, multiply by 6 = 6 minutes. If, however, the plate is not correctly timed this can not be done. Then look *through* the plate and see if the blacks are intense and look at (but not through) the plate with the yellow light shining on it and see if the creamy lights are just starting to get dirty looking. If so, wash and put in hypo. If afterward plate is too thick, it can be thinned in Farmer's solution. For this reason it is safer to over-develop than otherwise. Non-halation and orthochromatic plates must be developed still further; or, if correctly exposed, use a multiplier of 9. Excessive development may make the negatives too yellow; in this case add more sulphite of soda to the next.

No. 7.—How can I prevent pinholes? Dust the plateholder and slide, blow out the groove, and tap it with side of brush, then dust the plate. When developing, rock the tray.

How can I prevent brown or stained negatives, but of the right color to obtain good prints?

Sal soda....................	1 ounce
Sulphite soda..............	1 ounce
Water	8 ounces

For a 5 by 7 plate, take 3 ounces of water and 1 ounce of above solution. Throw in half a teaspoonful of dry pyro; it dissolves in a few seconds; develop. Keep the bromide handy and follow generally the directions given in my article in The Photo-Beacon, July, 1899.

No. 8.—Why do I spoil so many negatives in development when I know they are timed all right? Your sulphite of soda is not neutral, but is too alkaline; it, therefore, neglects its own duty (preventing the staining of the plate) and the negative is thick and brown, and takes upon itself the duty of the sal soda, making it stronger, giving a flat negative. Because the impure sulphite permitted the pyro to decompose and act too slowly. Use the hydrometer.

No. 9.—Is there anything the matter with my sal soda? Sal soda, too, becomes stronger as it gets older, because it is dryer. The weight formula, then, is apt to give a flat negative, even if the sulphite is all right. Use a hydrometer.

No. 10.—Why can not I develop a good plate or film in cold weather? Between October and April the water and often the room are too cold. When ready to develop, test a large pitcher of cold water. Pour in boiling water until a thermometer shows 80° Fahr. The addition of the cold developer and plate and the use of the cold graduate and tray will bring this down to about 70° for each plate. This is about right for the plate.

Negative by Wm. Seeling, A HAPPY PAIR. Cincinnati, Ohio.

No. 11.—How long would you give an average landscape on a bright day in midsummer with a Cramer Crown or any other plate? With a kodak, smallest stop and fastest shutter, with a Zeiss lens working at U. S. 4, $\frac{1}{100}$ second. On a Seed 23, or non-halation, or Eastman yellow label, $\frac{1}{50}$ second. On a Carbutt 23, or Cramer Anchor, $\frac{1}{25}$ second. On a Cramer slow isochromatic, $\frac{1}{8}$ second. On a Carbutt B 16, $\frac{1}{5}$ second.

No. 12.—What are the best views on cloudy days? White buildings, portraits and groups out of doors. Also rivers and lakes between the camera and the sun (clouded).

No. 13.—Can I take any views in windy weather? Yes. Marine views of a certain kind can only be had in rough weather, and the excess of light enables one to work with a rapid shutter, and by holding the camera in the hand the wind does not interfere. Hill and mountain scenery, where we have rocky or watery foregrounds and the trees some distance away, generally present fine cloud effects in windy weather, there being lots of light in the open. No tripod need be used. Color-screen for clouds, with fast shutter and largest diaphragm.

No. 14.—What is the best way to take lakes and rivers with the sun shining? If the lake or river is not too wide, wait until the sun is just below the top of the bank on the other side directly opposite the camera, so as to throw the camera in shade. This will give clear dark reflections in the water against a clear reflected sky. The angle of the incidental rays of the sun with the water equal the angle of reflection to the camera, giving a fine effect.

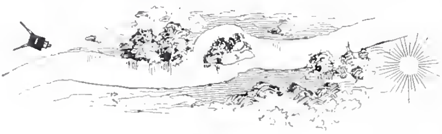


FIG. 2.

No. 15.—When should I use the large and small diaphragms? On average landscape and street scenes, use fastest shutter with largest diaphragm on bright days, with moving objects in the foreground. Under the same conditions at the seashore and on large lakes and rivers, use the smallest diaphragm with the fastest plates. Better use a larger diaphragm and slower plate if there are no moving objects in foreground.

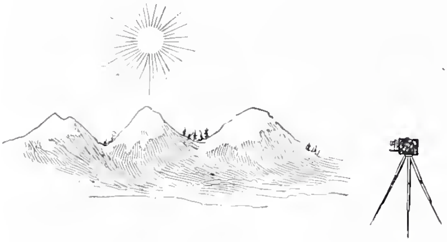


FIG. 3.

No. 16.— Why is it so difficult to get a good negative of a winter scene? Halation, overtiming and poor lighting are mainly responsible for this. For the former, use a non-halation plate. Time as for summer views, using smallest stop. If there is sun and snow, light with the sun as nearly opposite the camera as possible, shading the latter, however, by a tree, or corner of a building. If just past midday the lens may be shaded with the hand. All the hillocks of ice and snow will then be topped with a high light standing out from the shadow behind it, and the dark trunks of the trees will be silhouetted against the light landscape.

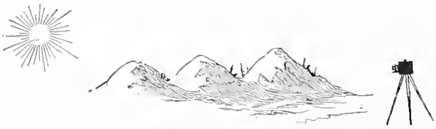


FIG. 4.

No. 17.— How can I make a good portrait or groups out of doors when the sun is shining? Place the person or group on the porch, or a side of the house which is completely in the shade, so that no sunlight will show in the picture. Use largest diaphragm, and place group several feet from the house, thus throwing the latter out of focus and still leaving it dark enough to show up the figures. The shade under the roof of a wide porch still further gives the effect of rotundity. Expose eight times longer than for average landscape, or about $\frac{1}{5}$ second, with plate equal to Cramer Banner, or Eastman yellow label, and lens working at U. S. 4. For kodak, take the group in sunshine. Upon development, if you have a good negative, except for the chalk and charcoal appearance of the faces, take another in the shade; give four times your sun exposure, and you will have a good negative.

(*To be continued.*)

MR. PATRICK'S PICTURES IN JANUARY ISSUE.

I want to congratulate you on securing Mr. James Patrick as a contributor and also to thank you, and through you, Mr. Patrick himself, for the pleasure that his pictures in the last issue of THE PHOTO-BEACON gave me. It is photography par excellence. I have studied and admired them more than any other photographs I ever saw. He is an artist in every sense of the word, and may I hope that more of his work will grace the future pages of THE PHOTO-BEACON? I can not say too much for his pictures. They appeal to me so strongly that I feel that I must express to some one my admiration of his work. It is such work as this the amateur world needs to spur it on to better and larger efforts. It shows the possibilities of the camera, and this work should be an incentive to every amateur who sees it to redouble his or her efforts to attain such an ideal as Mr. Patrick's work reveals. Few of us can ever attain that level, but in *striving* to attain it our work will show improvement, and we will be all the better for our endeavors. That some "good can come out of Nazareth," we must all admit, and while it is not natural for an American to think that any other country can produce anything that beats the ability of a Yankee, yet one must admit that the work that Mr. Patrick shows far exceeds the efforts of amateurs on this side of the water. That is a rather broad assertion, and while work of its equal may have been done by American amateurs, they have not allowed the reading world to see the results of their efforts, but rather have allowed their talents to be hid under a bushel. If American amateurs can produce work that equals that of Mr. Patrick's, I trust that some of it may be published. They owe it to themselves, to their country and to their fellow-amateurs.

When writing Mr. Patrick, please express to him my appreciation of his work and assure him of the pleasure that his pictures have given me.

Yours truly, F. E. Foster.

Negative by L. D. Brown, Chicago.

SUMMERTIME.

PHOTOGRAPHERS' ASSOCIATION OF AMERICA. — MEETING OF THE EXECUTIVE COMMITTEE.

Held at Milwaukee, Wis., January 8, 1900.

President Stein in the chair.

All members of the executive board present.

The reports of the secretary and treasurer were read, showing a balance of cash on hand $1,201.43. The president appointed J. George Nussbaumer and George M. Edmondson an auditing committee on the secretary and treasurer's accounts. Committee reported them correct. Treasurer Frank W. Barrows presented his bond and was accepted.

It was moved and seconded that the next convention be held at Milwaukee Industrial Exposition building, July 23-27, inclusive. Carried.

Next order of business, preparation of prize list.

It was moved and seconded that the divisions be abolished. Carried.

The following was unanimously adopted:

The purpose of this exhibition is to show only such pictures produced by photography as may give distinct evidence of individual artistic feeling and execution.

From the pictures submitted for exhibition a selection will be made by an examining board, and such pictures will be hung as in the opinion of the board are within the scope of the exhibition, as expressed above. Each exhibitor will be furnished with a certificate of acceptance of his work. No pictures, whether accepted or not, can be removed before the close of the exhibition.

CLASSES.

Grand Portrait Class.— Six pictures, sixteen inches or larger. First award, selected; second award, gold medal; third award, silver medal; fourth award, bronze medal; fifth award, diploma.

Genre Class.— Three pictures, sixteen inches or larger. Subject to be chosen by the photographer, the title to be appropriately inscribed on the picture. First award, selected; second award, gold medal; third award, silver medal; fourth award, bronze medal; fifth award, diploma.

Miniature Class. — Eighteen pictures, the largest dimension not to exceed four inches, all to be grouped in one frame. First award, gold medal; second award, silver medal; third award, bronze medal; fourth award, diploma.

Class A.— Twelve pictures, thirteen inches or larger. First award, gold medal; second award, silver medal; third award; bronze medal; fourth award, diploma.

Class B.— Twelve pictures, the largest dimension to be nine inches. First award, silver medal; second award, bronze medal; third award, diploma.

Class C.— Twelve pictures, the largest dimension to be six inches, all to be framed in one frame. First award, silver medal; second award, bronze medal; third award, diploma.

Landscape Class.— Nine pictures, any dimension. First award, silver medal; second award, bronze medal; third award, diploma.

Marine Class.— Nine pictures, any dimension. First award, silver medal; second award, bronze medal; third award, diploma.

Foreign Class.— Best collection of photographs of any size, framed or unframed, to be delivered to the association free of charge. First award, silver medal; second award, bronze medal; third award, diploma.

RULES AND REGULATIONS.

1. No exhibitor can enter more than two classes.

2. All competitors must be members of the association, except in the foreign class.

3. When one dimension of picture is given, it applies to the entire length or breadth of the picture in all cases. This rule applies to the size of the print, not the mount.

4. All exhibits must be framed.

5. The association will not be responsible for any loss or damage to pictures in its charge, but will use all reasonable care to prevent such occurrences.

6. Applications for space in the art department will positively close July 7. Applications for space in this department must be made to George B. Sperry, first vice-president, 319 Summit street, Toledo, Ohio.

7. All pictures submitted for exhibition must be addressed to George B. Sperry, first vice-president, Milwaukee Industrial Exposition building, Milwaukee, Wisconsin, forwarded at owner's risk, charges prepaid, and delivered not later than July 14. Pictures from abroad come under the same rule.

8. Exhibits for the manufacturers and dealers' department to be shipped to J. George Nussbaumer, Secretary Photographers' Association of America, Milwaukee Industrial Exposition Building, Milwaukee, Wisconsin, charges prepaid, and must be placed in position by July 21.

9. Have your box covers screwed instead of nailed. Your home address must be marked on the underside of cover for return of packages. The association will not be responsible for packages not so marked. Put screw eyes and picture wire for hanging in the box.

10. All boxes and packages will be accepted at any time previous to July 14, so that photographers need not feel any uncertainty about the safety of their goods. No exhibits will be allowed to be removed from the hall until the close of the convention.

11. No manufacturer, dealer, or their representative, shall do business on the floor of the hall unless he or they rent floor space or desk room.

12. All exhibits must be entered under a number given them by the vice-president, and shall not contain any name or markings that shall reveal the identity of the exhibitor. Exhibitor's name will be attached after awards are announced.

13. All entries for competition must be prints from negatives made since the last convention.

Moved and seconded that the prize list and rules and regulations be adopted as above. Carried.

Moved and seconded that the secretary be instructed to write to Mr. C. M. Hayes, accepting his kind offer to send for exhibition foreign exhibits, representing typical up-to-date photography of people, habitations, and interesting sections of the country from all nations of the world, extending to him the thanks of the executive board. Carried.

Moved and seconded we appoint an honorary vice-president in each State to represent the association in their State. Carried.

The following committees were appointed:

Medals and Buttons — Edmondson and Sperry.

Transportation — Nussbaumer and Sperry.

Hotels — Stein.

Exhibits and Decoration — Edmondson and Sperry.

Printing — Nussbaumer and Stein.

Program — Nussbaumer and Stein.

Amusement — Stein, and Milwaukee resident.

Negative by J. Will Palmer, Nashua, N. H.

WINTER.

Moved and seconded that the secretary be instructed to write E. C. Eldridge, curator of the Layton Art Gallery, accepting the kind invitation of the president and trustees to visit the Art Gallery during the convention, also conveying the thanks of the executive committee. Carried.

A communication was received from the Photographers' Association of Wisconsin, stating that owing to the Photographers' Association of America accepting the invitation of Photographers' Association of Wisconsin to hold their twentieth annual convention at Milwaukee, the Photographers' Association of Wisconsin will hold no convention in 1900, but will join heartily with the Photographers' Association of America in making the convention of 1900 the largest and most successful convention known in the history of photography.

There being no further business, the meeting adjourned subject to the call of the president.

J. George Nussbaumer,
Secretary.

HOW TO BUILD A STUDIO IN THE BACK YARD.

THIRD-PRIZE ARTICLE.

The first requisite in building a studio suitable for an amateur is a copy of "Artistic Lighting." Then if you can get hold of a secondhand tent about 12 by 16 and 10 feet high, and rip the seams in the north side of the roof so that two or three widths of the canvas can be rolled up from the top of the wall to the ridge-pole, you have accomplished the main object in building a studio, namely, the screening off of all light except that which comes from a single opening in such a direction as to give the proper lights and shadows on the face of the sitter.

The main fault with a tent, however, is that the walls are not high enough. A 12 by 16 tent usually has only a 4-foot wall. To remedy this, sew a width of duck clear around the bottom of the tent, beginning and ending at the "door." This will make the walls about 6½ feet high. It will then be necessary to splice the end poles, making them 2½ feet longer.

After the tent is set up, it should be strengthened by planting a post in each corner and another at the middle of each side — or, in other words, a row of three posts along each side of the tent just inside the wall. These may be of material 2 by 2 inches, 8 feet long, set in the ground 18 inches. Strips of 1 by 2 inch stuff should then be nailed to the tops of the post, making a solid frame just the height of the walls. This will require two strips 12 feet long and two strips 16 feet (or four strips 8 feet). A strip of the same material reaching from the top of the frame to the ridge-pole should then be fastened under each of the third, fourth, fifth and sixth seams in the north side of the roof. These seams should then be ripped and the canvas cut off at the fold where the wall joins the roof. A stick about 1 by 1 by 3 feet, tacked to the end of each width ripped out, converts these widths into roller-shades which enable the photographer to regulate the size, shape and position of the skylight.

A gray blanket makes a good head-ground, and may be hung against an end of the tent, extending from the end pole to the post in the south corner. If the corner seam of the tent is ripped for two or three feet, and held open by a stick about eight inches long, the light shining on one side of the blanket will produce a shaded effect, giving a lighter ground for the darker side of the face. A blanket background should be out of focus when photographed. If your lens is not rapid enough to produce this effect when the sitter, three or four feet in front of the background, is in sharp focus, then have some one shake the blanket during exposure.

The tent should stand in the shade, but no trees or buildings must obstruct the view of the sky from the posing-chair. As a 12 by 16 tent consists of seven widths of canvas, it will be seen that the skylight occupies the middle of the roof, so the background may be placed in either end, and portraits taken with right or left light as desired. Exposure may be calculated at about twenty-five times ordinary landscape, or if you have a portrait-lens working at *f*-4, the light on a bright day will be abundant for drop-shutter work.

Such a tent, new, of 8-ounce duck,

Negative by Frank Porter (aged 14), Berwyn, Ill.

FIRST BOAT ON CHICAGO DRAINAGE CANAL.

can be obtained for $10, including twenty yards extra for the width at the bottom. The lumber described should not cost over $1. Secondhand tents are offered at from $3 to $5.

It sometimes happens that buildings and trees stand in such a way as to form part of the walls and roof necessary for a studio. In such cases an old carpet and a few quilts, or anything that will screen off the light that is not wanted, will serve nearly as well as a tent.

JOHN C. MAHIN.
Riverside, California.

RACINE, WIS., January 29, 1900.
Editor of THE PHOTO-BEACON :

DEAR SIR,—Your favor of recent date enclosing letter from Mr. Gardner is at hand.

The plans which he characterizes as "flimsy" were made from measurements of a summer cottage in which I spent my vacation last September. The number and dimensions of the rafters, joists, etc., are exactly what were used in this building.

As this building, together with five more exactly like it, has stood the wear and tear of camping parties all summer, and the wind and snow storms of winter, on the edge of a bluff thirty feet above the lake, without any apparent deterioration, for seven or eight years, Mr. Gardner's prophecy of a collapse after the first snow-storm falls rather flat.

As to lighting: the skylight was made rather large for such a small gallery, with the idea that, all amateurs being given to experiment, one could secure any kind of lighting he desired by the use of curtains, my own idea being to place the camera near what Mr. Gardner calls the back wall and to pose the sitter near the corner of the darkroom. The plan places the light *three* feet from wall, not *two*, as Mr. Gardner states.

I find on looking up the memoranda of cost given me by the mill that the item door and two windows is set down at $5. If the copy you have is $3, it is a mistake in copying.

The idea of using a roofing paper instead of shingles is not so new as to be a subject for argument. I know of a building with nearly flat roof which was so covered four years ago and does not leak a drop today ; it has never been cemented or painted.

The price of glass for skylight was given me at a retail store in this city, and includes putty and points sufficient for setting it. If Mr. Gardner is paying twice as much he is being badly taken in.

I notice in reducing the drawings you have failed to change the scale of the end elevation and floor plans ; scale should be ⅛ inch to 1 foot.

IRWIN H. NELSON.
1027 College avenue.

DEVELOPMENT OF GELATIN PRINTING-OUT PAPER.

Here is a formula I have just worked out :

Tolidol	20 grains
Sulphite sodium (dry)	45 grains
Citrate potassium	20 grains
Citric acid	5 grains
Water	4 ounces

Restrain with fifty per cent solution citric acid, a drop at a time as demanded.

Print for faint detail only — soak print in salt water (about 10 grains salt to the ounce) for three or four minutes. The salt bath is important, as it relieves the print of free silver nitrate which would otherwise have a tendency to darken the print equally all over with great rapidity when it is placed in the developer.

Develop only as far as you wish to have it in the finished print, as it *does not go back,* even when fixed in a dry-plate fixing bath, for several hours.

These developed prints tone readily in any gold bath. RALPH MARTIN.

ELECTRIC LAMP FOR DARKROOM.

Editor of THE PHOTO-BEACON :

DEAR SIR,— Acting upon your request that subscribers suggest subjects for articles in your magazine, I would be much interested in instructions for making an electric light for the darkroom. I imagine one with a copper and zinc battery could be made by one with a little mechanical ability, and without much expense. A two or three candle-power light would be ample for the purpose.

I have seen electric lamps with storage battery advertised for darkroom, but I would prefer being independent of storage batteries. Very truly,

W. H. WILCOX.

PHOTOGRAPHS IN COLOR.

A pleasing range of tone can readily be obtained on Velox or Dekko by adding to the developer a restrainer which allows of prolonged exposure without fogging the resulting prints. The colors obtainable are green, brown, orange and red with their intermediate shades. The prints closely resemble carbon prints, particularly when the carbon Velox or carbon Dekko is used, and without the troublesome manipulations necessary in carbon printing.

Having conducted a series of experiments recently with a view of getting away from the cold black and white so much used, I offer through the *Illustrated Express*, the amateur's friend, a simple method of obtaining a wide range of colors suitable for various subjects.

Either metol or hydroquinone can be used, but the most satisfactory results, on the whole, are obtained by the use of a combination of the two. Prepare the developer according to the following formula:

Water	1 ounce
Metol	7 grains
Sodium sulphite	24 grains
Hydroquinone	3 grains
Sodium carbonate	40 grains
Potassium bromide, 1 to 10	5 drops

This developer will give a good black. Make a stock restrainer composed of

Water	1 ounce
Ammonium bromide	20 grains
Ammonium carbonate	20 grains

The exposure will be many times that necessary for black tones, and unless Welsbach gaslight can be used, daylight will be found less trying to the patience, particularly when red or brown prints are wanted. Different exposures will, of course, be required for the various grades of Velox and Dekko, those below being for Dekko, which seems to allow of the most pleasing variety of colors. For use, one ounce of developer is diluted with an equal quantity of water and stock restrainer added in varying proportions.

For prints in green, add four drams stock restrainer. Exposure should be about thirty times that required for black tones.

Brown: Use 6 drams stock restrainer instead of 4 and expose about one hundred and twenty times exposure for black.

Orange: Use 8 drams stock and expose about sixty times exposure for black.

Red: Use 12 drams stock and expose about one hundred and fifty times exposure for black.

The brown obtained by the use of 6 drams stock is a pleasing yellow brown. A red-brown can be obtained by using the developer as prepared for red tones and exposing about thirty times exposure for black.

A good, quick-printing negative, with Dekko and above undiluted developer, will produce a black print at noon on a clear day, this time of the year, at the unobstructed north window, in about one-tenth second, so for red tones about fifteen seconds would be required; with gaslight at 4½ inches, about 20 minutes and with Welsbach light, about 7 minutes will be necessary. The longer the exposure and consequently the shorter the development, the yellower the tone; the longer the development the browner the tone. Development must not be carried too far or the print will be darker than desired. All the colors dry darker than they appear when wet, and, with the exception of the green, change color. The orange, before drying, is a lemon yellow, the red is a light yellowish terra-cotta, which dries a bright Bartolozzi red. If the prints are muddy, without proper contrast, the exposure has been too long. A plain one-to-four hypo bath may be used to fix prints in, but the alum bath recommended by the maker of the paper is better.—*Buffalo Express.* ULYSSES G. ORR.

THE "Photo-Beacon Exposure Tables" are good for snow scenes. Price, 25 cents.

TOLIDOL WITH DEVELOPING PAPERS.

I was surprised at the excellent quality of some platinotypes that I saw the other day, and more than surprised to find out that they were not platinotypes at all, but just plain Velox prints. They were of a pure blue-black color, full of detail in the half-tones, transparent in the shadows, and the whites were above reproach.

I have seen and made oceans of Velox prints, but these lay over anything in my experience. To tell the truth, I was not satisfied that they were Velox prints until I had made some myself according to the new directions.

Mr. F. J. Monsen, demonstrator for Kirk, Geary & Co., of San Francisco, is, I believe, responsible for the developing formula that opens up this new field for Velox.

Tolidol is the agent that does the trick, but the composition of the devel-

Negative by D. H. Wulzen, Jr., San Francisco, Cal.

MERCED RIVER, YOSEMITE, CAL.

(Third Prize.)

oper is somewhat different from the one furnished for the purpose by its manufacturers.

Here is Mr. Monsen's formula — it is simple enough, and it certainly does wonders with Velox :

Tolidol	20 grains
Sulphite of soda	90 grains
Carbonate of potash	90 grains
Water	4 ounces

For use take one part of the above and one part of water, adding a drop or two of ten per cent bromide solution if found necessary.

You Velox workers know how suddenly the ordinary "M. Q." developer works, and how spry you must be to get your prints into the hypo before they are over-developed. Just hold your breaths and listen while I tell you that I have taken as long as ten minutes in developing a Velox print with Tolidol (did it purposely) and still had good whites. Of course, you do not need to take more than a minute for perfect development, but with this new developer you can, seemingly, take as much time with it as you want to.

I mention this to give you an idea of the latitude in exposure and development that Tolidol allows you to take with Velox.

CHESTER A. BURRETT,
269 East Ontario street, Chicago.

PHOTOGRAPHIC HUSTLING.

Editor of THE PHOTO-BEACON :

DEAR SIR,— I inclose herewith a print from a negative made on Thanksgiving day for the Philadelphia *Evening Telegraph,* of the football game at Franklin Field (Cornell against University of Pennsylvania). The boys started play at 2:05 P.M., at 2:17 I was in an automobile with six exposures, and started for the studio, two and one-half miles off ; arrived there at 2:30. Plates were developed and prints made by 2:40 of two of them, and at the half-toner's by 2:50. In the meantime the game was being telegraphed to the paper, set up, printed, and the papers were delivered out at the grounds before they were entirely empty, with the two photographs at the head.

This print is on Carbutt's Vinco paper, which, so far, I have found the best for hurry, the waste being very much less than with the slower bromides.

Yours, JAMES F. WOOD.

PHOTOGRAPHY AS A HOBBY IN WINTER.

FIRST-PRIZE ARTICLE.

How to use photography as a hobby to best advantage during the winter months depends upon one's inclinations and opportunities. The hobbyist in Southern California may spend the alleged winter photographing flower-beds and orange trees laden with ripe, yellow fruit, while the resident of Quebec squeezes himself into a bath cabinet and makes Velox prints and lantern slides by the light of the oil stove. Between extremes, a great variety of indoor work suitable to various tastes may be accomplished during the long evenings.

Winter is the ideal time for study. The short, gloomy days do their best to choke off the kodak fiend and discourage unintelligent snapping ; and when the hobbyist goes forth under the open sky and lists to Nature's teaching, she says : "Go back home and seek wisdom."

What to study will be determined by what has already been learned. Three essential points, however, must be understood before any great works of art can be turned out, and these are : the apparatus, its capabilities and limitations ; how, when and where not to use it ; and the technic of developing and printing.

If one's camera is not adapted to the line of work he desires to do, it may require considerable study to select an outfit that will satisfy his growing demands. A knowledge of the business "principles" of certain dealers will save the amateur many dollars and disappointments. Catalogues contain a great deal of information, including much that is not so. For example, a tricky lens-maker sends out a chart pretending to compare the work of his product with that of two other manufacturers. He does not mention the series or prices of the three lenses tested, but gives their focal length and working aperture, from which data one discovers that the lens of his own make is his latest and most improved anastigmat, while the other two lenses are cheap, antiquated patterns that the makers do not pretend to class with their later types. Again, a catalogue from New Jersey contains the statement that a certain camera is equipped with "a Bausch & Lomb Iris diaphragm shutter," which is, to all intents and purposes, a lie, although the word Iris saves it from being literally so.

The sincere student will subscribe for at least two photo magazines, and enter the competitions, as a test of his own progress, rather than to win a prize. He will secure text-books on those branches of the art which interest him. "More books and fewer plates" is a good motto. Good pictures in magazines and illustrated works may be studied with profit, but half-tone reproductions printed from plates that had been scratched all over and defaced by a dressmakers' tracing wheel are not worth a second glance.

Amateurs who have access to art galleries and libraries should take advantage of their opportunities, or they will find themselves outclassed by some of their country cousins who own about two dozen books, all told—and know them by heart.

To those who have facility and taste for mechanical work, winter offers opportunity for the construction of accessories which will be needed next summer. Mats, kits, envelopes, drying racks, fixing and washing boxes, dark-room lamps, printing-frames, and even plateholders, can be made at home as easily as toning trays.

A person handy with tools can take a grocery box and make a stereoscope, in accordance with the principle explained in The Photo-Beacon for December, 1898, that will do finer landscape work in some respects than any camera now on the market, and the total cost need not exceed $1.50, plus whatever he wants to spend for plateholders. The Gundlach people will sell a pair of single unmounted lenses for $1.

Any camera having reversible back can easily be arranged to take a number of pictures on one plate. A cigar box will furnish all the material required to add this feature to a 4 by 5 camera. A piece cut the shape of Fig. 1 and made to fit easily in any position in the frame of the reversible back, in front of plate-holder, allows only one-quarter of plate to be exposed at a time. Small pictures made by means of this arrangement are virtually long-focus work, and superior to anything that can be accomplished with a pocket kodak. A strip 2½ by 4 divides the plate in halves, and a board 4 by 5, with a central opening of any size or shape desired, will give negatives with clear glass margin. Fig. 2 shows form of block for two exposures on one plate, and Fig. 3 shows the same idea applied to the smaller pictures, four to the plate.

Unless one has a place for everything and keeps everything in its place, a good job for a winter's day would be to provide suitable shelves, drawers, boxes, etc., and put a plain legible label on every box, bottle and package. A small cabinet for chemicals, etc., might be constructed, with glass doors and sides made with old negatives. Empty paste-bottles, thoroughly cleaned and provided with new corks, are convenient for holding dry chemicals.

It would take a whole issue of The Photo-Beacon to describe the accessories that can be made during a winter by the hobbyist with a mechanical head.

Those who want immediate results, good, bad, or indifferent, will amuse themselves with flash-lights, bromide prints, transparencies, copies and enlargements, lantern slides, portraits, interiors, and such outdoor work as opportunity affords.

The photo fiend with an eye to business might rake in a few shekels by copying the priceless old-time pictures to be found in every family album, such as "Pa in his first boots," "Ma at the age of four," etc. A collection of lantern slides from these old portraits would form the basis of a novel entertainment.

A history of the lodge, church, or town might be given, with biographical sketches of prominent members or citizens. A child picture, taken perhaps forty years ago, is thrown on the screen, while a skilful speaker relates wonderful deeds that have been accomplished by the precocious kid. As he comes down to recent events, and later photos of the subject are shown, the audience begins to recognize a description of their genial policeman, congressman, or postmaster. The bright amateur can readily imagine the possibilities of such an exhibition.

John C. Mahin.

Box 982, Riverside, California.

SNOW PHOTOGRAPHY.

A great many amateur photographers give up outdoor photography as soon as winter sets in. They seem to think because things look bleak and barren they are not worth photographing, because there is nothing to take but snow and leafless trees.

Winter photography is just as interesting as summer photography, though not always so comfortable. If you have taken a landscape during the summer which you think is an extra fine view, take it again from the same point when the ground is white and the trees are loaded with snow; make some tracks in the snow in the foreground, and you will have just as fine a winter landscape as you have a summer one. It will be no more difficult to take than was the one in summer.

Photograph a street in the city or town when the curbing is piled high with snow shoveled from the sidewalk and horses are wading knee-deep in the snow, and you will have a companion for the one you took of the same street in summer. Take a picture of a driveway in the park when the evergreens are hanging low with loads of snow on them, and you will have a finer view than you could get of it in summer.

After a cold rain, when the rain has frozen on the trees and shrubs, and they are bending nearly to the ground with the weight of ice on them and glistening in the sunshine, photograph such a scene as this and you will have a picture you can seldom get more than once a year.

A snowstorm scene is something every one wants, and is just as easy as any other scene. The only thing is opportunities are not so great. Select beforehand the scene you wish to take during a snowstorm, so you will not have to hunt one up when the snowstorm is on. Find a place where you can get back out of the storm eight or ten feet — under a tree, a shed, an awning, porch or some such place so no flakes will fall in front of the lens for a distance of eight or ten feet, or the flakes will look like a snowball storm in the finished print. Take the picture against a dark background. When the flakes are large and thick they seem to come down so much slower and easier. With a fair lens, large stop and slow-speed snap shot, a snowstorm is easily accomplished. The light is somewhat hard to judge in winter, so that a photometer or exposure-tables will be found of great convenience. The day may seem just as bright in December or January as it did in July or August, but the force of light is not near so strong. For ordinary landscapes with a bright light, an abundance of snow and sharp contrast of light and shade, give a long exposure with a small stop. With a bright day and sun obscure, which will diminish the contrast between light and shade, give a shorter exposure.

Always have or make some tracks in the unbroken snow in the foreground. Dark objects — that is, a dark horse and dark cutter or buggy — make a far better contrast than a light or white horse and light-colored sleigh, or a person with light clothes on.

Use an isochromatic instantaneous non-halation plate for snow scenes and ice scenes. When the sun is shining, the snow reflects light into the lens, which will cause halation. This can only be prevented by using a non-halation plate, or an ordinary plate backed with one of the many preparations used for that purpose.

For nearly all snow scenes an isochromatic instantaneous plate, large stop and slow-speed snap-shot exposure, will be found to give very satisfactory results.

W. Marshall.

24 South Porter street, Elgin, Ill.

THEORY AND PRACTICE.

That theory and practice have a place in photography in general and in amateur photography in particular can not be gainsaid, but the theoretical part is for the more advanced students of the art that has and is fascinating so many people in this country and abroad. In the efforts of those who wish to probe the whole matter to the core and understand the chemical analysis of every solution or combination as well as the philosophical and mathematical "whys and wherefores" of the principles of optics and light, theory as well as practice has an important part to play and is essential in attaining the positions that many of the foremost amateurs of this country have gained for themselves.

But in the vocabulary of the beginner in amateur photography it seems that practice, or practical matters, should predominate and leave the theoretical to come into the art by natural growth. To the one taking the first steps in pho-

Negative by Leo. L. Reed, Auburn, Me.

(Second Prize.)

tography, there is sufficient matter and subjects that are complicated to the novitiate, aside from the deeper things that eventually develop themselves and take their place by the natural process in the make-up of the conscientious and progressive amateur.

In his efforts to advance, the beginner naturally turns to the press or well-known text-books that throw light on the subject that has enthralled the being of an amateur. In many cases, he turns to these with confidence, but is disappointed. Hoping to find therein aids and helps that will assist him in overcoming many of the trivial difficulties that beset the path of the beginner, he is met with thoughts, ideas, plans, theories, etc., that confuse rather than clear his mind on the subject he would understand and master. Instead of being clad in language that he can comprehend and digest, he is confronted with terms that are foreign to his understanding, and instead of leading him toward the light tend to further confuse and bother him, so that it is often the case that a beginner throws all outside aids to the winds and, having mastered the rudiments of the art, strikes out by himself in his endeavor to succeed. In the majority of cases such resolutions bring the amateur to failure and disgust and, thus nipping the aspirations of one who might become a credit to the art, he casts aside everything but the mere mechanical part of photography and goes on a "snap-shot fiend," content with the mediocre work that is not a credit to himself or to the art and pastime that would give him welcome. May we not ask if he did not seek for bread and was given a stone?

It is the advocacy of the practical rather than the theoretical that I think has appealed so strongly to the amateurs of the country in THE PHOTO-BEACON. Therein many have found the plain, everyday advice and assistance that so many seek in their efforts to attain a higher plane in photography.

The writer would emphasize the cultivation of the practical side of amateur photography first. Master the rudiments thoroughly, and, when this is accomplished, the growth will be natural and will eventually embrace the theoretical side of photography. Step by step the advance will be easy, and one by one the complex and misunderstood phases of photography will become your own and your work will attest the thoroughness of your study of a subject that appears to reach out in every direction, presenting at every turn some new and fascinating line of work.

Then let us encourage the practical side of amateur photography and urge its cultivation in the press and text-books that seek to help the advancement of the art. The practical is essential and we may rest secure in the thought that the theoretical will come to each conscientious worker by natural growth, and as it does, it will open up to him new vistas of pleasure that he never dreamed of when struggling with the perplexing and vexing first principles of amateur photography.

Cultivate the practical side of your work; the theoretical will take care of itself.

F. E. FOSTER.

YELLOW SCREENS.

We all know what a great improvement it is to a landscape to have a cloudy sky in keeping with the rest of the picture — soft or bold, as may be most effective. The want of a yellow screen is what prevents most of the amateurs from obtaining these agreeable skies. I have three screens of different shades of color, and I believe every earnest photographer should have one or more, and as they are not hard to make I hope the readers of THE PHOTO-BEACON will have them.

Select an old or useless negative of very thin, clear glass, and cut it into squares about 1¾ inches on each side, or larger for a large lens, clean off carefully all gelatin and select for use the best two pieces. Take a piece of rubber sheet — unvulcanized preferred — from $\frac{1}{32}$ inch to $\frac{1}{16}$ inch thick, and cut a square the size of your glass; then cut out the center about $\frac{3}{16}$ inch from the edge all around, which will give a square washer to keep apart the glasses and form a holder for the solution.

Cover one side of the rubber with rubber or tire cement and lay the glass evenly on it; turn it over and we have a shallow dish. Fill this heaping full of a solution of bichromate of potash (after putting cement on this side of the rubber washer), and holding it over a basin, lay on the other glass and hold firmly together while you plunge the whole under water and slip along two opposite edges two brass clips, like those shown in Fig. 1. These are made of sheet brass bent to shape, filed smooth, polished and lacquered on the outside. This completes the screen. Of course, the glass should be perfectly clean and the solution filtered. How the brass edges look from one end when on is shown in Fig. 2, in which the heavy line shows the end of the brass and the shaded portion the end of the rubber. Notice that the brass binds at the inside edge, acting as a spring to keep itself on, and holding the glass firmly against the rubber. Start them over the glass at one end and slide them endways along. If the whole is under water, no air bubbles will enter.

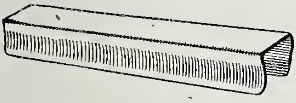


Fig. 1.

In my own three screens, one was a saturated solution, one was a saturated solution to which one-fourth water had been added, while the third was nearly half water. I use the second one most and multiply the exposure by 3 on an orthochromatic plate or by about 40 on an ordinary plate. I have made nearly a dozen of these screens and find them equal to the best for ordinary outdoor work, and superior to most of the low-priced ones sold. Besides giving the different shades of green in foliage, and the correct value of blue as in the sky, they almost entirely prevent halation. I place mine inside the lens board between three very small hooks, but they may be used outside, of course, in which case make from the sheet brass a short tube with two hooks to hold the screen in front of the lens.

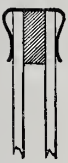


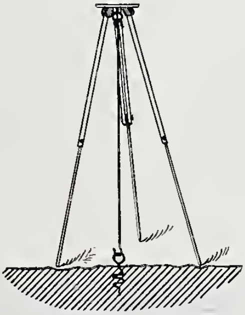
Fig. 2.

Henry C. Earle.
190 Meeting street, Providence, R. I.

PRACTICAL POINTS.

TO STEADY THE TRIPOD.

Put a screw ring into the under side of your tripod head; have a blacksmith make a small screw (like the screw picket pins with ring on the top) about four inches long. Next get a piece of rubber cord, such as is used on the light-weight exercisers. Securely fasten a hook to each end of it. Now, all that is necessary to secure a steady camera, in any wind, is to screw the pin into the ground, under the tripod head, and hook the rubber to head and pin, and the tripod can be raised or lowered without interfering with it.



FOCUSING CLOTH.

The best thing I have ever found for this purpose is a sleeve made of *heavy black* sateen, with a good strong rubber band run in each end. The end that goes on the camera should be the smallest. Cut a hole in the proper place for the tripod screw, and thus secure it to the tripod with the camera.

You will be able to do business with this cloth in the wind, without swearing, and if you place your hand in it, when withdrawing and inserting your slides, you will never have a light-struck plate.

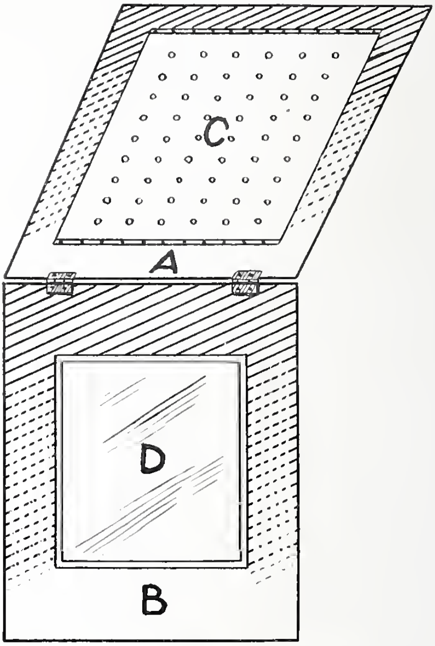
MOUNTING GLOSSY PRINTS.

This has been a good deal of trouble and has caused the loss of many good prints that were in all other particulars a fair success.

Make a light wood frame 4½ by 5½ inches (inside measure) out of good clear pine pieces ¾-inch thick by 2 inches wide. (A in cut.) Now get a piece of straight grain, smooth pine (B); sandpaper until very smooth. Fasten frame A to this with two hinges, as shown in diagram. Get a piece of plate-glass, 4 by 5 inches, gouge out a place in board B, into which the plate-glass will fit tight, lay level, and project ⅛ inch above the board.

Now go to the man who is in the habit of irritating your molars for you, and get a piece of rubber dam, such as is used to keep cavities dry while filling. Have him cut holes in it as shown in cut (C). Fasten this to frame, with two strips of wood, tacks, and royal glue, stretching it the long way, fairly tight. This size is for 4 by 5 prints. To operate, lay the print face down on the glass (D), close frame A down on to it, go over the back of rubber C with the paste-brush, open up frame, and put print on mount. Prints can be mounted in this way very clean and rapid, with a little practice. DR. WILLIAM H. STEELE.

Forest City, Iowa.



MADE WITH BURKE & JAMES RAY FILTER.

EDITORIAL TABLE.

From D. H. Wulzen, Jr., pharmacist, Junction Market, San Francisco, we have received a set of calendars which are novel, since the usual half-tone is replaced by photographs of charming bits around the city. We presume they are from Mr. Wulzen's own negatives, and think they should attract considerable attention.

THE CHICAGO PHOTOGRAPHIC SALON.

Don't forget that all pictures must be in the Committee's hands by March 17, 1900. All communications to be addressed to F. K. Lawrence, 65 State street, Chicago.

Home Hobbies, Arts and Crafts

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CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER,

INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

PRELIMINARY.

Before entering upon the regular matter this month we will answer a query that has been sent in by one reader. We fancy his trouble is not an uncommon one, for as a matter of fact almost everybody who owns tools must have been in the same fix at one time or another.

This gentleman writes : "I have an old back-saw of a good make, whose blade through neglect and abuse has become buckled, and of course I can not saw straight. Can I get it straightened up so that it will pay to have it sharpened ?"

Yes, it can be put right in a very simple way. Take it by the handle and strike the back very lightly on a piece of wood at a point between the buckling and the handle, but very close to the spot where the buckling is. If the blow be given at the right spot, and of the proper force, it will take the curve out of the blade. Too hard a blow will make a buckle in another place, but a little experimenting will soon get it straight. Then it can be filed and set ready for use.

We are more than surprised at the amount of knowledge the average man does *not* possess about tools and how to use them. One writer asks if it would not be wise before going any farther to take up the different tools we recommended, and explain the points in their construction, how to adjust the parts and how to use them. Take a plane for instance. He says he finds two pieces of metal locked together, but he does not know which one is to be used for planing, and even if he knew that, he would not know what the other one was for. Again, should the two edges be brought together, or $\frac{1}{16}$, or $\frac{1}{4}$ or one inch apart, or is it a matter of indifference where they are. "Again you speak of jack-planes and block-planes. I look up a catalogue and there I see listed fore, jointer and smooth planes. Kindly tell me the difference between them, and also when each should be used. Supposing I have a piece of $\frac{7}{8}$-inch by 8-inch stock, three feet long, rough on both sides, that I want to smooth nicely, just tell me which plane to start with and in fact all about it. I don't know anything, but I want to learn a whole lot, and I want to learn it right.

BENCH-HOOK.

Another necessary tool for our work will be a bench-hook to hold much of our work as we saw it ; and, with the eccentric attachment shown, work can be cut or carved that needs the use of both hands. This bench-hook can be used as a "shooting-board" if at any time it becomes necessary to do end-planing on small work. A working drawing, showing sizes of all parts, is given here.

Take two pieces ½ by 10 by 10 inches wood and glue together; let one project 1 inch beyond the other on the side so as to keep the saw from injuring the bench when the work is sawed off. Also two pieces ⅞ by 1⅛ by 10 inches long, one glued and doweled at each end.

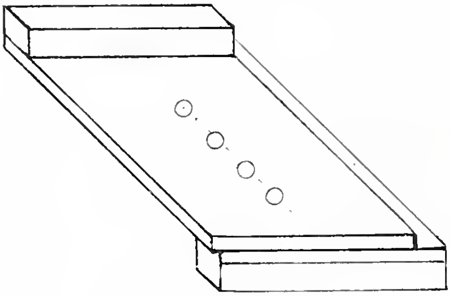


Fig. 1.—Bench-hook.

This makes the bench-hook that is also used as a "shooting-board." Through the center of the bench-hook are bored ½ inch holes 1¼ inches apart for the eccentric. This eccentric is a circular piece of ½-inch board 3½ inches in diameter, cut with a coping-saw and filed smooth on the edge; ¾ inch away from the center and toward the circumference, bore a ½-inch hole and in it glue a piece of ½ inch dowel 1½ inches long.

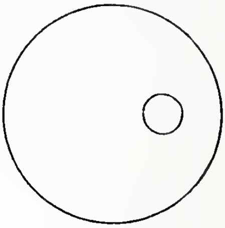


Fig. 2.—Eccentric.

Let the dowel project 1 inch. This will fit into any of the holes we have

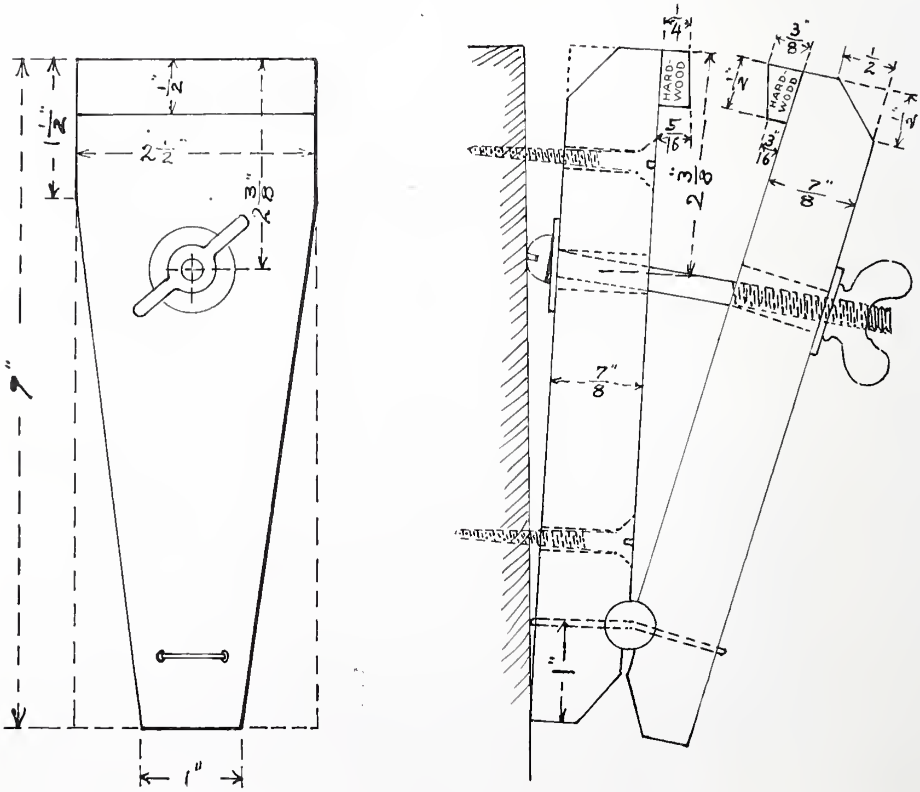


Fig. 3.—Hand-vise.

bored in our bench-hook and, by simply giving it a half turn, will hold securely different widths of wood. The ends of a strawberry crate will be found to be the right size and thickness to make the body of the bench-hook, but it can be made of any material at hand.

HAND-VISE.

A SMALL HAND-VISE is shown in Fig. 3, together with the working drawings, so that it can be made with no more expense than for a 3-cent stove bolt with two washers and a thumb-nut. We suggest securing it to the bench by means of screws, where we will often find it useful and handy. In doing this it will be necessary to remember two things: first, that it should not project above the top of the bench or it may interfere with the "bench-stop"; and second, that it must be carefully fitted, but not fastened together, until after it is secured to the bench, or we would be unable to get at the screws with our screw-driver.

TO MAKE THE HAND-VISE, proceed as follows:

1. Saw two pieces of ⅞-inch thick smooth stock 7 inches long (it need not be hardwood).

2. Plane one edge smooth and "square" with the wide face.

3. Measure 2½ inches from the "tried edge," and draw a line parallel to the tried edge for the extreme width.

4. Plane the other edge to this line.

5. Mark the lines of chamfer on the face and end and bevel one corner as shown in Fig. 4.

6. Plane across the grain *toward* this bevel, holding plane on the angle until the chamfer is formed.

7. Put both pieces together and bore a hole for the hinge. One-half of this hole will be in each piece and the pieces must be held tight together when boring (put them in the bench-stop). Bore the hole straight and at right angles to the edge.

8. Now plane the pieces to the tapering shape.

9. Fit a piece of dowel or round stick for the hinge and secure with a piece of wire passing through the jaws and dowel in the form of a staple, leaving the ends long enough to twist together. If you have no wire use a piece of stout string, and, in the absence of a gimlet to bore holes, heat a wire nail red-hot and burn them through. The wire ends must not be twisted together until after the vise is screwed to the bench, and then must not be so tight as to prevent the vise from opening.

10. Bore the holes in both jaws for the thumb-screw bolt; these should be a trifle larger than the bolt. The bolt can be bought at any hardware store; ask for a ¼-inch stove bolt 3½ inches long, with two washers and a thumb-nut to fit.

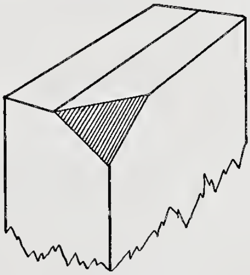


FIG. 4.

11. Bore three holes in one jaw for the screws that will hold the vise to the bench: two screws at the top and one just above the hinge.

12. Make the small pieces marked "hardwood," which are the only pieces that will ever wear out. Glue them in place at the upper end of the jaws.

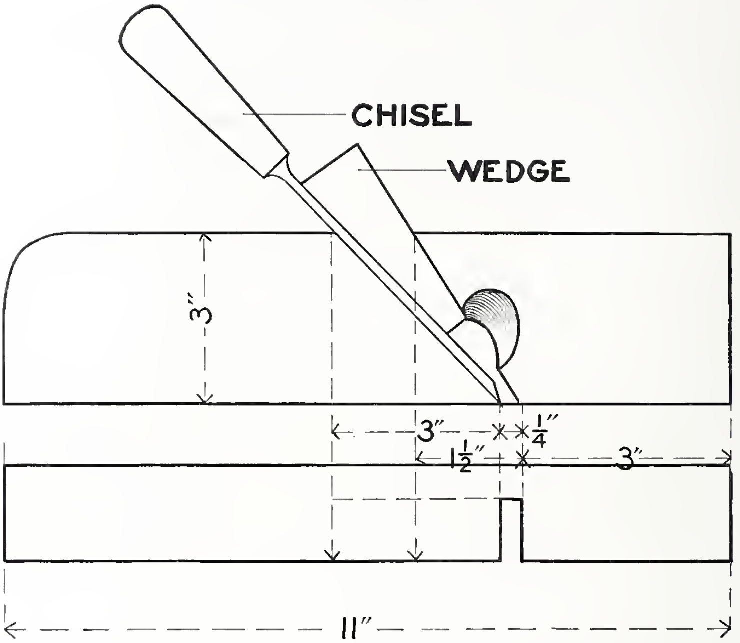
13. Clean all over with sandpaper — then shellac.

14. When dry, insert the bolt through a washer and into the vise from the back and screw to the bench. Twist the wire ends together at the hinge (not too tight); put the thumb-nut on and go to work.

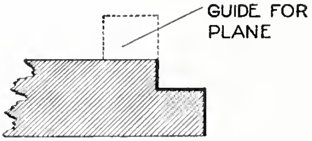
HOME-MADE RABBET-PLANE.

A simple rabbet-plane, which will be of service occasionally, can easily be made, using an ordinary chisel for a plane-blade. It is used to plane a rab bet thus, and is useful in making picture-frames, etc.

It is far more comprehensive to explain many things by a drawing than by words. This is one, and having the



drawing before us scarcely any explanation is necessary. A guide consisting of a strip of wood with a straight edge, can be clamped on the work so that the plane will ride over the same course each stroke. The chisel is inverted so as to do away with the cap-iron; the bevel on the chisel will curl the shaving upward and the opening gouged out of the side, diagonally, gives a free exit. This gouging is done with a curved chisel or gouge.



The end of the stock is rounded so as to be more comfortable to the hand than a sharp corner. To "set" the plane, i. e., to adjust the blade to take the proper thickness of shaving — tap the handle end of the stock with a hammer to draw the blade up; further tapping will loosen the wedge. Tapping the other end will, of course, have the opposite effect upon the blade. After either adjustment, tap the wedge very lightly with the hammer to be sure it is tight.

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL,
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of The Photo-Beacon Company.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

Accepted literary articles will be paid for upon publication.

Secretaries of photographic societies are requested to favor with brief reports of their meetings.

Subscribers advertising secondhand apparatus for sale or exchange, special articles wanted, help or situations wanted, *one insertion free.*

To insure insertion in any particular number, copy for advertisements must be received not later than the 20th of the month preceding.

All communications relating to The Photo-Beacon should be addressed to

THE PHOTO-BEACON COMPANY,
TRIBUNE BUILDING,
CHICAGO, ILLINOIS.
Eastern Office: 80 Wall Street, New York.

Negative by Stanley R. Symmes, San Francisco, Cal.

THE AMERICAN RIVER.

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. APRIL, 1900. NO. 4.

THE EDITOR WANTS A FAVOR.

The last time the editor saw the head of the Rochester Optical Company, the latter insinuated the firm never heard from the advertising in THE PHOTO-BEACON. He had his little fun then, now the editor wants his. The Rochester Optical Company has just issued a really fine catalogue, which, by the way, must cost about 10 cents each, and the editor wants every reader of THE PHOTO-BEACON to drop a letter or postal card asking for one. If the firm does not get a few thousand letters within ten days of the issue of this number, the editor will feel the readers have not treated him right, and don't forget to mention THE PHOTO-BEACON.

MR. PATRICK'S PICTURES.

In reply to a letter requesting particulars of the pictures reproduced in January issue, Mr. Patrick writes: "They are published in sepia carbon,, 4¾ by 6½ inches in size, price, unmounted, 25 cents each, or on brown mounts with brown paste-on-tint, 35 cents each; 6½ by 8½ inch prints, unmounted, 60 cents; mounted, 75 cents each. The following are 4¾ by 6½: *"Light and Eventide," *"The End of the Day," "The Faggot Gatherer," "The 'Roaring' Shepherd's Cottage," *"Near Swanston," "Toilers of the Field." The following are 6½ by 8½: *"In the Sweet Spring Time," *"Homeward," and *"Harrowing." Those marked with a star are also published in 10 by 12 size, mounted $1.50, unmounted $1.10. Extra should be added for postage.

Our readers will be delighted to hear that Mr. Patrick has this year carried off the gold medal in the open class of the Edinburgh Photographic Exhibition. The title of the picture was "The Miry Beasts Retreating frae the Plough." We would suggest that such as order from Patrick should add this last to their list.

THE CHICAGO SALON.

On April 3 there will be opened in the Art Institute the first photographic salon ever held in Chicago. As we make ready for press the jury of selection have completed their labors, and they have publicly announced that the collection of prints that will be hung on the walls will emphatically be the finest ever shown on this continent. More pleasing still is the fact that Mr. Ralph Clarkson, one of the jury, and one of our best known Western artists, has stated just as decidedly that he entered upon his share of the work in an indifferent mood, not believing that it was possible to produce anything that could be considered artistic by means of the camera, but that in selecting the pictures the jury had considered only their artistic merits, and that the limitations of photography were not admitted in the least. And looking at the work from that standpoint he announced that photography had made good its claim to be considered by artists and art-loving people to be a method of artistic expression.

The Eastern jurors acknowledged that they came prepared to make concessions to Chicago in the matter of standard, but on finding the high quality of the work before them, they at once raised it, with the result that much of what was accepted by the same men in Philadelphia and also hung in the English salon has been rejected in Chicago.

The salon will be open from April

3 to 18, and with such a golden opportunity at their doors to see the finest collection of photographs perhaps ever shown we feel we do not need to urge our local readers to see them early and often.

LITERARY COMPETITION No. 12.

A very excellent set of articles is the outcome of this competition, and our only regret is that we have so much matter on hand that we can not begin to print the contributions for a month at least. But they are good and will keep.

First Prize.—Chester M. Whitney, Trenton, N. J.

Accepted (not arranged in order of merit): J. E. Johnston, R. W. Hilts, C. W. Hammond, W. Marshall, C. W. Hackett, William E. Brown, Percy L. Trussell, A. G. Graff, Benjamin W. Douglass, C. J. Lockerson, E. M. Miller, Martin Johnson.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

RULES.

1. Write on one side of the paper only.
2. Be brief, sending less than one thousand words, if possible.
3. Never mind style — use the smallest words you know.
4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.
5. Write your name and address at the end of the article.
6. Mark the envelope "Literary Competition."
7. Preference given to practical articles, that is, those that tell "how to do things."

Just a word to contributors. We do not wish them to send in articles on subjects we have lying in reserve, so we print here a list of copy of practical subjects we have on hand:

"Binding The Photo-Beacon," "Intensification," "Tray Making," "Keeping Developers," "To Make a Flash Lamp," "Stereoscopic Photography with One Lens," "To Make a Print Trimmer," "Negative Vignetter," "Print Vignetter," "Making Kits," "Portraiture by Flash-light," "Building a Darkroom," "Photographing Children," "To Make Oval Guides for Print Trimmer," "Enlarging."

PICTORIAL COMPETITION No. 22.

A dozen competitors entered the lists in the Intensification Competition, and it was rather difficult to award the prizes, as the work was remarkably uniform. We would say one thing about the reproductions. Half-tone blocks always tend to reduction of contrast, and our readers can readily understand that the difference in the prints is much greater than we are able to show.

The awards were as follows:

First Prize — Miss M. Hornback, Dorsey, Illinois.

Second Prize — Frank E. Foster, Iowa Falls, Iowa.

Third Prize — E. M. Miller, Des Moines, Iowa.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F.R.P S.

CHAPTER IV.

THE SKY, AND HOW TO PHOTOGRAPH IT.

Probably no photographer who values his reputation for technical skill would nowadays permit a print to leave his hands with a blank white space in lieu of sky, although the time is not far distant when such photographs were common enough. But something more than mere technical skill in printing skies into a landscape in such a manner as not to betray the artifice of the photographer is demanded of those who desire to create pictures by means of photography.

The importance of the sky as an element in the production of a pictorial photograph it would be difficult to exaggerate; indeed, it often supplies the motive or sentiment intended to be expressed by the picture. Many an otherwise uninteresting — nay almost commonplace — subject may be transformed into a thing of beauty by the introduction of a *suitable sky.* We would lay the greatest emphasis on the adjective, for unless great care and thought be bestowed upon the selection of the sky negative, both in the matter of the form and of the lighting of the clouds, the most displeasing and incongruous results may be produced. We must be careful to see that the lighting of the clouds is from the same direction as that from which the landscape itself is lighted. For this reason it is a good plan to use films for taking skies rather than glass plates, because they afford the opportunity of printing from either side. In the matter of the form and shape of the clouds, we must observe that these are in harmony with the general scheme of composition of the landscape, to which they are wedded, and that due balance of parts is secured.

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*Copyright, 1900, by F. Dundas Todd.

The student must be earnestly warned against the use of strongly lighted and generally under-exposed and over-developed negatives of heavy cumulus cloud taken against the light — the ordinary "cloud negative" of the photo-store dealer ; in fact, skies such as these will very rarely serve a useful pictorial purpose, though it may be well to include a few in a complete and representative collection of cloud negatives. Such a collection can not be too numerous or too varied, for however extensive it may be the necessity will constantly arise of taking a special cloud study to produce a particular effect.

It is not to be supposed that the presence of sunshine is necessary to enable good cloud studies to be secured. On the contrary, it will be found that if truth is studied a soft gray quiet effect, which can only be properly obtained in the *absence* of sunshine, will be as often required as a strongly lighted and vigorous effect.

There are two points that must not be lost sight of in connection with the photographing of skies for purely pictorial purposes ; the first is to avoid spotty or scattered lighting, a condition of things often observable in nature, but which, if perpetuated in the photograph, can not but detract from its pictorial value.

Negative by C. W. Norman, New York.

SPRINGTIME.

Second, care must be taken to avoid an undue amount of sharpness in the cloud forms themselves. This can be secured by judicious focusing and by not yielding to the temptation to stop the lens down. In general, concentration of light and shadow — a harmonious grouping of broad masses — are the qualities to be sought, with at the same time an avoidance of anything approaching to a critically defined outline, which latter, if present, will mar the due rendering of atmospheric effect, which quality, above all others, it must be our aim to secure.

It is a much-debated point whether it is better to secure the sky upon the same plate as the negative or to print it in from a sky negative. Good results may be attained by either method of working. The first named, however, presents the greatest difficulties, both from the pictorial and technical points of view. It does not, of course, follow that the cloud forms visible at the moment when the landscape is to be photographed will be so disposed or arranged as to combine most effectively with the landscape to form a harmonious whole, and it is, moreover, always difficult to give the foreground sufficient exposure without over-exposing the sky. On the other hand, we are less likely to fall into the errors of lighting or of producing the theatrical and often false effects of light and shade, which faults are frequently so unpleasantly conspicuous even in the work of our leading pictorial photographers. The technical difficulty of securing uniformity of exposure in sky and landscape may be minimized by using a shutter of the type we referred to in chapter I, or even an ordinary flap shutter. The shutter in question is so simple in construction as perhaps to arouse the contempt of my American readers, whose predilections for "natty apparatus" are well known. But, apart from its somewhat clumsy appearance, the instrument is of undoubted utility, and has certainly enabled us to secure effects which by no other means could have been obtained. We use it in this way: After focusing we carefully note how far it is necessary to pull down the shutter so as just to shut off the light from the horizon upward. Then, when making the exposure, we pull the shutter slowly until it reaches this point, and then increase the speed until the descending shutter reaches the same point, when, if necessary, we slightly pause before pulling the shutter right down. With a little practice the shutter may be so manipulated as to give an exposure of several seconds to the landscape and a mere fraction of a second to the sky. With regard to the pictorial value of this method of working, we would say that when it should be employed and when not is a matter that must be left to the discretion of the individual worker, who should be guided by his own artistic judgment in deter-

Negative by R. D. Cleveland, Chicago.

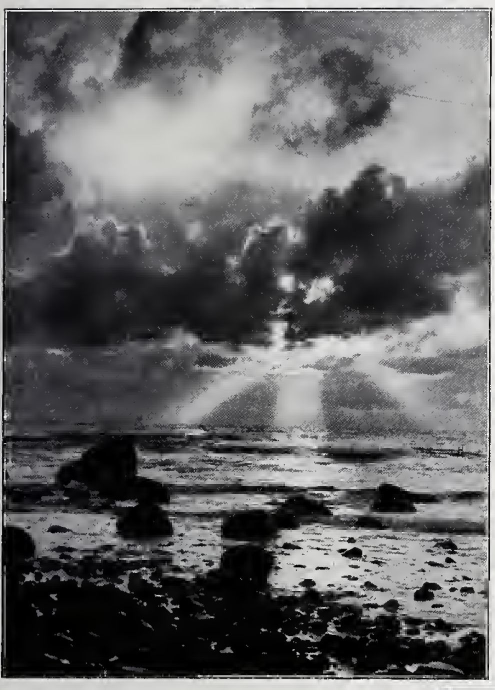


Fig. 11.

mining whether the particular conformation of clouds existing at the moment of exposure is such as to be in thorough harmony with the desired interpretation of the subject.

Turning to essentially practical considerations, the choice of a plate first claims consideration. For sky photography, *if results approximating to a truthful rendering are desired, it is absolutely essential to employ isochromatic or color-corrected plates,* either with or without a screen. With these aids it will be possible to secure printable negatives of the most delicate sky effects, to attempt which with ordinary plates would only result in failure. Whether it will be necessary or desirable to use a screen will depend upon the character of the sky or cloud effect which it is desired to photograph. Wherever there is much blue present then it is imperative to use a yellow screen to reduce its light action upon the plate. Without this precaution in the case of photographing white clouds floating upon a blue sky we get the latter printing almost to the same tone as the former, and the result is necessarily flat and untruthful. On the other hand, when photographing late in the evening, or toward sunset, when the heavens are luminous with the red and golden rays of the setting sun, the employment of a screen would tend to exaggerate tone value in the contrary direction, the very yellowness of the light itself acting as a light-filter. In such cases judgment and experience must be our guide.

We have already advised the use of backed plates in all pictorial work, but certainly when photographing sky and cloud effects their employment is essential to success. Not only are they a great protection against the evils of halation which are often so conspicuous in

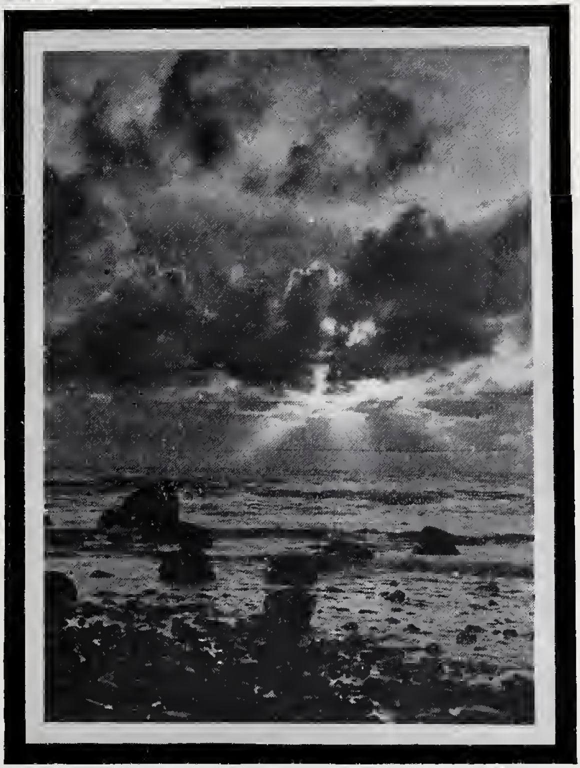


Fig. 12.

cloud photography, especially in photographing against the light, when it frequently happens that a portion of brilliantly illuminated sky is brought in juxtaposition with a cloud in heavy shadow, but they are equally useful in securing detail, and faithfully rendering the faint and delicate tracery of the cirrus or "mare's-tail," which it would be almost useless to attempt to secure upon an ordinary plate.

Sky negatives, as a rule, unless for some special purpose a very strongly marked effect is desired, should incline to thinness rather than density. The heaviest cloud effect in nature is always lighter in tone than the landscape to which it forms a canopy, and this fact must be remembered when developing the negatives no less than when printing from them. The greatest care should be taken to give a correct exposure, because although we may succeed in producing a printable negative any deviation from accuracy either in the direction of under or overtiming can not but detract from an accurate rendering of the aërial perspective of the clouds, which it must be our primary object to secure. No great departure from the system of development employed for ordinary work is needed, nor is it necessary to recommend any special developer, the only point to be guarded against is the use of too strong a solution. In general the best result will be obtained by taking a normal developer diluted with an equal bulk of water. We ourselves believe that pyro, by reason of the control which can be exercised with it, will be found must suitable. Care must be taken not to carry development too far, or the tonality of the negative will suffer. Err rather on the side of thinness than excess of density. During development carefully watch the principal light, and avoid getting it too dense to show detail in printing. When printing, if the gradation is good the secondary lights should have perceptibly discolored when the detail of the highest light begins to print. If, however, when the shadows are sufficiently printed the tone values of the principal light and secondary lights are apparently equal, the development of the negative has probably been carried too far. Fig. 11 is an example of a sky subject in which these defects exist; the spotty and scattered lighting, it will be seen, produces a restless feeling in the mind of the observer and causes the eye to wander from one patch of brightness to another. In Fig. 12, however, we have an illustration of a cloud effect in securing which the foregoing principles have been observed. Note how the concentration of the principal light, and the due subordination of the lesser or secondary lights, produce a feeling of unity and strength. It is this quality that we should aim at producing when making our sky negatives.

But although we have so far confined our attention to the portrayal of sky effects in which cloud-forms more or less strong are the dominant feature, we must not lose sight of the importance of these soft, gray effects, which can be so truthfully reproduced by photography. We mean those soft, low-toned, quiet, misty skies, when no cloud outlines are visible and the air is motionless, and the atmosphere more or less hazy and misty.

We have in the reproduction entitled "River Mists," Fig. 13, an effect in which this aspect of nature is, we think, rather strikingly shown. To have printed clouds into such a subject would have quite destroyed the sentiment and actuality desired to be conveyed.

Care must be taken in developing such subjects by tilting the dish, or applying bromide with a mop, to prevent the sky portion of the negative from attaining too much density, but this can be easily guarded against by making the exposure with the shutter, which we have already described.

The alternative method of obtaining such a sky effect in those cases where the negative produces a white sky, in the print, is by "sunning down" after printing, an operation which we shall have occasion to refer to and describe later. It is better, however, whenever possible, to secure the natural printable effect *in the negative itself*, when a gray-day effect is sought.

"The Photo-Beacon Exposure Tables." Price, 25 cents.

ISOCHROMATIC PHOTOGRAPHY.

What is "Isochromatic Photography," and what are its benefits? According to the *Photo-Miniature* (No. 6) it means "correct color values." I suppose, for an artist, one of the benefits is correct rendering in monochrome of the colors as the eye sees them. This is a part of the subject that is beyond my ability to discuss, as I am not an artist. For me, isochromatic photography means a well-exposed landscape, with clouds which will print together. It is easy enough to get fine cloud negatives by using a small stop and short exposure, but in all such negatives the included landscape is simply black. The difficulty is to get clouds and a correctly graded landscape on one plate that will print well. This difficulty the isochromatic plate and color screen solves.

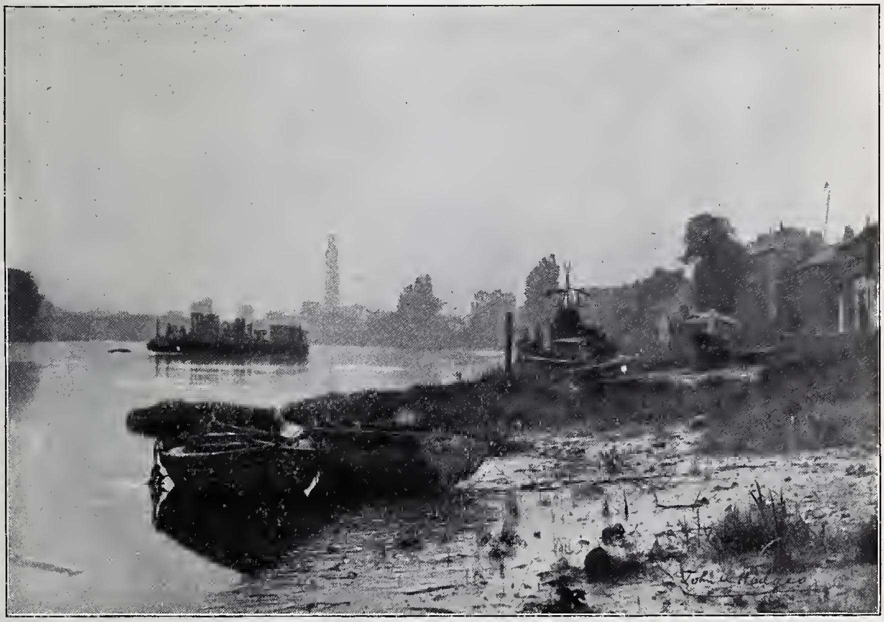
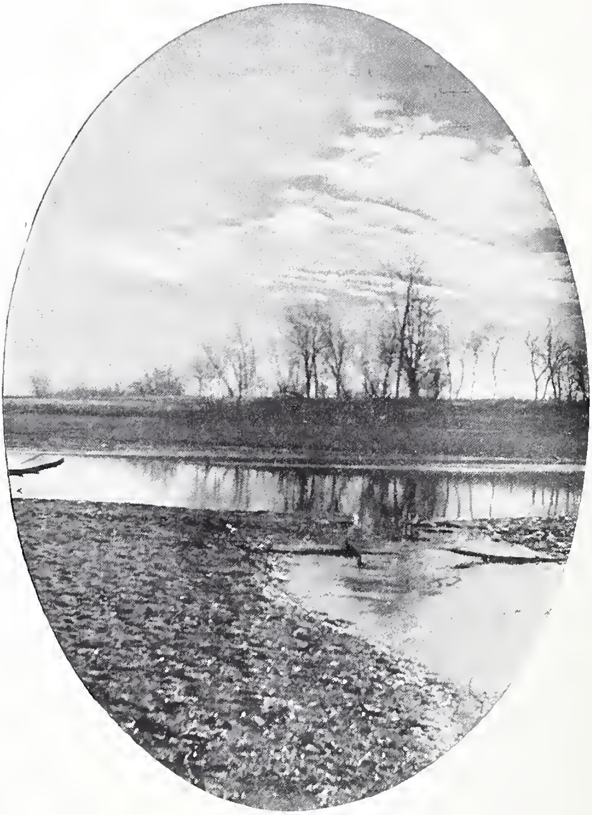


FIG. 13.

As to printing in clouds, using ordinary plates, not only does the process require two negatives, which probably have been made under different lighting, but the most experienced workers can not always cover up the process. Either the upper margin of the landscape is darker, or between the landscape and the printed-in clouds there is a white appearance one never sees in nature. Isochromatic negatives will print harmoniously; there will be no black margin or white separation.

The first consideration is to expose the plates against a suitable sky. (Of course it is inferred that the subject and composition are artistic.) So far, I get the best results when the sky is full of broken clouds. If there is much shadow in the landscape, it is well to wait until the sun is partially obscured, and give a longer exposure. Some amateurs may suggest that suitable days are few and far between. Then don't expose; wait. Right here is a good lesson for many amateurs to learn — save material; not only refrain from exposing on uninteresting subjects, but do not expose on good subjects until the light and clouds are suitable. Expose less plates, get better results.

I have seen it argued that by printing-in, clouds can be printed where they will harmonize with and balance the landscape to better advantage. Is this true? Clouds are always moving. Suppose when you focus your camera on a landscape, the clouds are not well arranged. Let them arrange themselves; wait until their present position is shifted for a more suitable one. Not very often will you have to wait longer than ten or twenty minutes. Then you will have them exactly where you want them, lighted as the landscape, and all on one plate; that is, if you can use the isochromatic plate to the best advantage.



Negative by E. M. Miller. Des Moines, Iowa.

I will now proceed to the method. Do not use a rapid isochromatic plate; you will generally meet with failure. I use Cramer's medium, and Bausch & Lomb's ray filtergraph, with their standard solution diluted one-third water. I think a glass color screen will yield about the same results. Be sure you give plenty exposure. Everything I have read gives the exposures much shorter than is necessary. Remember, you not only want to get the clouds, but a well graded landscape. I expose with stop *f*-8, rapid rectilinear lens, from six to twelve seconds, according to the density of the light. But lenses differ; and here is an excellent experiment, not only for correct exposure with your lens, but also for different effects for different times of the day.

Some day when the clouds are good expose twelve plates as follows:

At 9 A.M. (in the summer 8 A.M.) expose four on one landscape (stop *f*-8). The first, five seconds; the second, seven seconds; the third, nine seconds; the fourth, eleven seconds.

At 3 P.M. (in the summer at 4 P.M.), expose four plates similarly on a different landscape (where you get the most satisfactory clouds and lighting).

At 12 M. expose four plates, as follows: The first, three seconds; the second, five seconds; the third, seven seconds; the fourth, nine seconds.

These should be exposed on a well-lighted day, when the sky is full of broken clouds. Paste on the inside of each slide a square inch of thin paper. When the exposure is made this paper will be out; upon it write time exposure was made and number of seconds. In developing be careful not to get negatives mixed or the experiment will be useless.

Though the exposure is the most important thing, almost as important is the development. Do not use metol; it works too rapidly. I have tried it alone and in combination, and have spoiled every plate. I have never used pyro. My developer is hydro-eiko. Whatever developer you use, combine it this way: Use one-third less alkali (carbonate of soda, and dilute a regular batch of developer with one-fourth more water; that is, to 6 ounces developer add 1½ ounces water.

Negative by E. M. Miller, Des Moines, Iowa.

If you use a Bausch & Lomb filter-graph, keep the cavity full of liquid. Always keep the color screen fitted up tight against the lens cap. Do not let any direct sunlight fall on lens during exposure. Have developer about 70° Fahr.; if much colder, your negative is liable to be flat and spotted like dust spots; if much warmer, negative may be fogged. Stop development sooner than an ordinary plate; the isochromatic plate, exposed through a color screen, intensifies sooner, after the image appears. Don't expect immediate and unqualified success. If you get *one* satisfactory negative out of a dozen plates, you will do better than I can. I know of some amateurs that don't get a satisfactory negative out of a hundred plates. Be careful of light. *This is important.* Isochromatic plates are very sensitive. While filling plateholder and developing, keep the ruby-orange light shaded with a piece of non-actinic orange paper. Keep the camera (except lens) covered with focus cloth while withdrawing slide, exposing, and replacing slide. E. M. MILLER.

PHOTOGRAPHY AS A HOBBY IN WINTER.

SECOND-PRIZE ARTICLE.

It was at the close of what is generally accepted as the photo season that I read the announcement of this competition in THE PHOTO-BEACON, and it led me into an attempt to recall the various things which had suggested themselves in the course of the summer as occupations during these months, when the field of the camera lens is, by weather conditions, somewhat narrowed.

The first question which arose was: What can be done out of doors in winter? Now, it is a well-known fact that photographs of the blacks, whites and grays of this season are the only ones which are true to nature. And a little inconvenience from cold should not deter one from getting a good picture.

Perhaps you remember that little river scene which you snapped last summer, and which you thought so exquisite. Imagine its foreground and trees laden with snow; the river running black between two rims of ice and in still places sheeted over. Would not a picture of it under such conditions look fine in comparison with the summer view?

When walking along a country road in winter I have often noticed that in every stretch of woods, each and every individual tree had a distinguishing peculiarity of shape, whereas in summer even the species were hard to recognize on account of the dense foliage. A panorama photograph would prove and show this at its best. One way would be to set your camera first at one end of a straight line, parallel to the stretch you wish to take, and then make three or more exposures, moving far enough along the line at each exposure to get what was the left-hand edge, where the right-hand edge was in the foregoing picture, or vice versa as the case may be. A little snow would help considerably by contrast.

In the city on a morning after a sleet has covered everything with a sheet of pure white, glistening ice, most beautiful photos can be obtained. Especially is this true of night pictures, for by lining up a telegraph pole or a tree with the nearest electric light halation can be prevented and at the same time the fine effects which the light produces on the snow and sleet-covered earth, buildings, statues, etc., can be preserved.

Another novelty which requires for its successful consummation the conjunction of a full moon and a snow-covered ground, is the taking of a picture by an all-night exposure, of a garden, or any view which can be had from the window of a building where a camera could be placed without disturbance for that length of time.

But all such ventures, pretty results though they may bring, are by far too heroic for those photographic butterflies who flit here and there and everywhere in summer, snapping their kodaks. To their aid has come our comparatively new friend, the flash-light. And innumerable groups of families, friends and social gatherings are taken by its kindly light every winter. But its possibilities do not seem to be generally recognized. It occurred to me as I thought this over that some novel photos might be obtained in this manner: Suppose you were having a Hallowe'en party and the usual tricks were being played. Now, when one of the crowd braved the terrors of the dark cellar you might have your camera set up in an extra dark corner and as the novitiate passes, snap him by the aid of a hand-flash lamp, which are now so much advertised. Not only one, but all could be secured in succession and the result would be a series of photos, simply unapproachable. This is but an idea and no doubt it will suggest many variations.

Still-life studies can be made with great ease in winter. Let me tell you a way to please that sweetheart of yours, or perhaps to mollify that maiden aunt who does not approve of your muss.

Get a bunch of roses, the light shades are best, group them nicely in a vase and place them on a stand covered with some sort of light cloth or lace arrangement. Use a black shawl for a background, keeping it free from wrinkles and far enough back to get it out of focus. Now lean her photograph (whoever it may be) against the vase, focus carefully; and, when finished, label it: "There may be flowers, but none so fair," and present a copy to the subject. Observe this, however, if the creation is to be for the maiden aunt, be sure that it is a good, flattering job, for although love may be blind, this cold critic will most likely survey your product through a spectacle lens.

Decorating your rooms by means of photographs is another way of employing leisure hours in winter. A narrow space between two doors which open on the same side of the room adapts itself admirably to such a purpose. It is too narrow for large pictures and still wide enough to intrude its bareness on your eyes. To efface this procure from any picture dealer a thin picture mat which

Negative by H. D. Haffa, Waterloo, Iowa.

REFRESHING.

comes 30 by 40 inches. Cut a strip from this wide enough to fit the space and as high as you wish it. Now select five or six photos which you think will look best and give them a position on the mat. Next cut holes in the mat with beveled edges where you wish the pictures to be, allowing one-eighth of an inch on all sides for the picture to overlap. If you feel incapable of this task take it to a dealer who will do it for a nominal sum. The rest is easy; mount the prints flat, using backing paper for squeegee prints as described in August number on page 195, and then glue them in positions behind the openings, and fasten the whole in the desired space by thin brads or by small pieces of molding above and below.

The making of silhouette photographs is so old a dodge that it has become novel again. In front of a north lighted window fasten a thin white cloth in such a way that no shadow of the frame will fall on the cloth. Place your sitter sideways before this and expose for absolute density and clear glass, and on development you will find you have a most striking profile of your subject. A number of such would make an interesting study.

So varied are these indoor pursuits that space forbids me to more than mention lantern-slide and button making, colored mat-surface prints, enlarging and mounting stereoscopic pictures (which can easily be made by trimming down two larger prints).

But if you wish to get a genuine photographic hustle on yourself you should organize a camera club, if you are not already a member of one. The experience itself will be worth the trouble, let alone the benefits to be derived from an exchange of ideas, discounts from dealers, etc.

Any one who attempts to carry out one-half the suggestions presented here will find winter to be a busier photo season than summer. O. Von Engeln.

NO APRIL FOOLING.

April 1—March away—with a copy of "The Photo-Beacon Exposure Tables" in your pocket, and you can't be fooled.

PRACTICAL POINTERS FOR AMATEURS.

(*Continued from page 68.*)

No. 18.—How can I take a high building without raising the front of the camera so high that a slanting of the side of the building is visible on the developed plate? Take the view at a greater distance, then enlarge afterward, or use a long-focus camera or telephoto lens. Or, instead of taking it from the ground, where all the window lines vanish to one point of sight at the bottom, take it from the roof or balcony of another building, thus raising your horizon and center of vision and losing most of the slant.

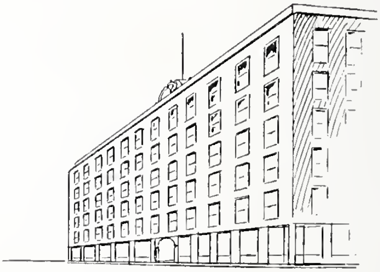


Fig. 5.

No. 19.—What is the best way to take a woodland scene with people constantly walking across the view, or a store window with the reflection of cars and general traffic? As neither of the views can be taken instantaneously, use a slow plate, such as Corbutt B 16, and the smallest diaphragm, and expose from half an hour in the former case to ten minutes in the latter. If a very light object should pass close to the camera, shield the lens with your hand for a second or two, until it has passed.

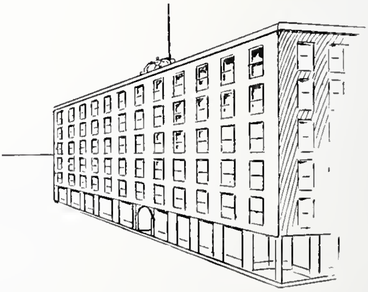


Fig. 6.

Choose a day dark enough to enable you to give a sufficiently long exposure.

No. 20.—What is the best way to photograph a parade or procession in sunlight? Choose a street where the sun will shine on the front and side of the parade. Photograph it from the other side front, preferably one story from the ground. The front of paraders, if marching open, will show illuminated against shaded side of street, and if close will each give shaded relief to the other.

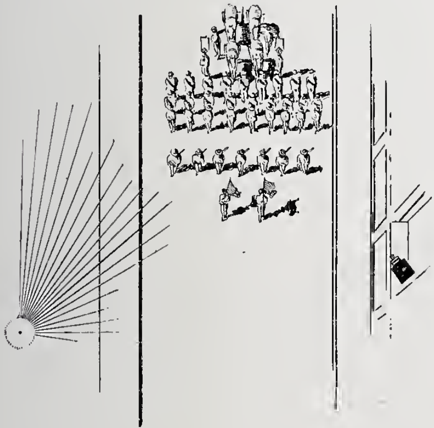


Fig. 7.

No. 21.—Tell me how to get the best effect in a waterfall, or rapids, or fountain? Let the sun (whether clouded or not) be enough behind the fall, but on the same side of it as yourself, to strike the water with an incident ray, which will give an equal reflected ray to the camera. By walking in front you will see when the water looks the brightest. The high lights project well from the deep masses of shadow in the water. A rapids or fountain taken this way is equally fine.

No. 22.—How should a ship or steam vessel be photographed? The sun should be on the side or a little astern—say the aft starboard quarter. Then the camera should be pointed toward the starboard bow from the direction of the bow, looking aft. All the details of the hull and masts will be in lighter relief against the shadows, and the shaded side of the spars and cordage will silhouette against the light sky.

No. 23.—What is the best way to get clouds in the negative? Dark clouds on a light sky will take on an ordinary plate, but white clouds on a blue sky will not; only the black edges of the white clouds will show. The actinic power of the blue sky causes it to impress the negative as white. An orthochromatic plate will take the blue sky as a gray. A color screen used in addition will make the blue take still darker, and then of course your white clouds will show. Increase the exposure five times.

No. 24.—What is the advantage of a telephoto lens, and how is it used? A scene which is too far from the camera to cover the plate (such as the American Falls from the Canadian shore) can by this means be made to fill the entire plate. This lens is fitted to your camera (the 4 by 5 costs about $18) and your own lens and shutter are fitted to the end of it (removable in a minute for ordinary view work); the view can be magnified up to eight times.

No. 25.—Whenever I photograph a race the figures are blurred. I have a fast shutter. What is the matter? Take nothing in rapid motion within twenty-five feet; then only when going at an angle to or from you, never when crossing the field of view in rapid motion. You can not take bicycle, horse or foot races successfully (unless at a distance and running toward the camera) with a shutter working even so fast as $\frac{1}{100}$ of a second. You need a focal plane shutter working in a good light from $\frac{1}{200}$ to $\frac{1}{500}$ of a second, with the most rapid plates.

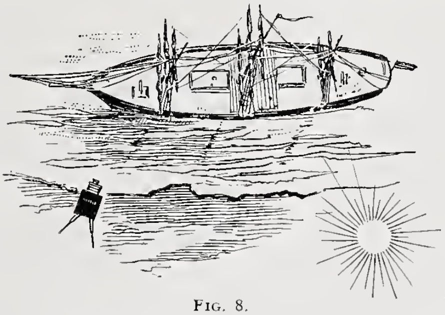


Fig. 8.

No. 26.—Why do amateurs generally fail to obtain good negatives of Niagara

Falls? Partly due to location, but mainly to over exposure. During the summer, in bright sunlight from 10 A.M. to 2 P.M., when taking the Falls and very little of the surroundings, working with good lens and shutter, expose for $\frac{1}{100}$ of a second, U. S. 64 or *f*-32, using a plate equal to Seed 26 X, Cramer Banner, Carbutt Eclipse, or equal to Seed's Non-halation at U. S. 32. These are better than the fast plates for Niagara. Kodaks and hand cameras use fastest shutter and smallest stop if working with rapid film. Do not take between 10 A.M. and 2 P.M. (unless cloudy) or you will over expose, as under the conditions given this is about the brightest and lightest (reflected) place on the continent, between the temperate parallels of latitude.

No. 27.—What is the best way to name or title the prints direct from the negative? A toy printing-press costing $3 or $4 has sufficient type to enable you to print a title on a ¼-inch strip of tracing paper which is to be pasted along the bottom of the negative, if the latter is thin at the bottom; if not, then scrape off a ¼ inch of the film from the negative and place the strip printed side to glass. An autograph can also be written on the tracing strip for photographs. Every print will then show the title or autograph from that negative.

No. 28.—What is the best printing paper for one who has little spare time, and mostly evenings? A developing paper like Velox and the bromides are the best, because prints can be made evenings by lamplight. The paper is tougher than collodion printing-out papers, and does not crack like them nor stain so easily, requires no ferrotype or burnisher, is more permanent and gives finer tones, does not curl in washing, mounts easier and takes color without sizing. Put the sheet of paper in a frame under the negative, hold a foot from a good lamp or gas from twenty seconds to a minute; take out the print, drop it into the developing tray. The image will appear in a few seconds. When it suits you in appearance dip it in a bowl or tray of water for two seconds, then place it in the hypo for ten minutes. Wash the prints an hour, lay them wet and separate on a large cardboard. When dry, trim and mount.

No. 29.—I can not always get pure whites in dull or glossy developing papers. Why is this? The manufacturers do not place sufficient bromide potassium in their formulas sent out with the paper. This is so that they can obtain a short exposure. It is better to double the amount of bromide. This will need a few seconds longer exposure. The blacks will then lose that disagreeable washing blue, slaty appearance, and will have an olive tinge of great beauty. Do not develop over fifteen 5 by 7 prints in 10 ounces of metol-hydro developer. More can be done, but the whites may suffer. The glossy developing papers will sometimes give dirty markings over the pure whites. These can be rubbed off with cotton batting dipped in wood alcohol, or can be washed off, or reduced, by placing in a tray containing hypo and water 1 to 6, to which a few drops of red prussiate of potash solution have been added. William Bullock.

(*To be continued.*)

NEW ADVERTISERS.

Our readers will note this month the advent of new firms in our advertising pages. In the line of cameras they will find the Chicago Camera Company and the Rochester Optical Company drawing attention to their new models, the Western Photo Paper Company, and F. M. Whipple advertise new brands of developing papers, the Claw Plate Handle Company have a decided novelty, And. J. Lloyd & Co. are pushing Thornton-Pickard shutters, while U. Nehring is offering a whole battery of lenses for a trifle.

A DEALERS' OPINION OF VINCO.

Moscow, Idaho, March 15, 1900.

Mr. John Carbutt:

I find Vinco so much superior to —— that it is a wonder to me the latter can be sold at all where your paper is known. The amateur who succeeds in finishing fifty per cent of his work creditably on ——— should be able to win ninety-five times out of a hundred with Vinco.

Yours truly, F. A. H.

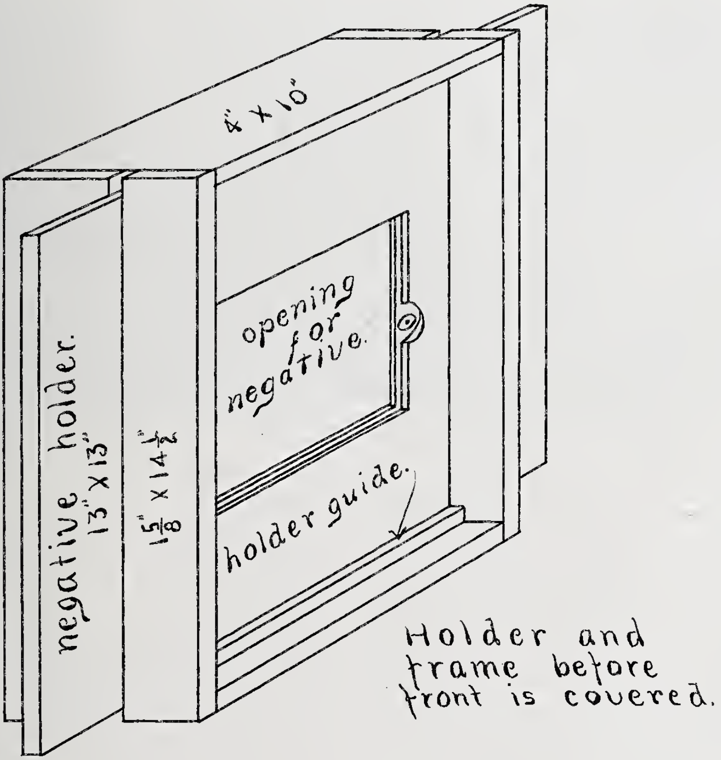
A SIMPLE ENLARGING ARRANGEMENT.

I know not if other amateurs are like myself, but in my own case it is true that the first reading of the method used to perform some operation or the particulars of some new photographic process often fail to interest me. If, however, I happen again upon an article relating to the same subject I begin to get interested, and am often led to follow the matter further.

This is my only excuse for adding still more to the mass of literature on the subject of bromide enlarging, a subject which is no doubt familiar to many of you, but as the army of amateurs is constantly gaining recruits, there may be some few to whom the subject is comparatively new.

In these days of small cameras there seems a very attractive field open to any one who is willing to take a little trouble. I say a little trouble advisedly, for bromide enlarging is not such a difficult operation as many imagine. Given the average amount of brains and patience, there is no reason why any one can not succeed.

I wish simply in this article to give some hints on the construction of an arrangement for producing enlargements — something that I know to be simple, easily made and effective.



Holder and frame before front is covered.

I can best do this by telling you how to make an apparatus similar to the one which I have in use at the present time and which gives me perfect satisfaction. My largest negatives are 6½ by 8½ inches in size, so I first made a frame of ¾-inch pine to hold this size of plate. Its outside dimensions are 13 by 13 inches, and the opening for the plate is 6 by 8 inches, with a ¼-inch rabbet to take the plate, which is held in place by two small wooden buttons. This frame is best put together by halving the corners. It should be "true" (i. e. not warped), so that it will slide easily into the holder.

I have a set of kits which fit in this frame and take any sized plate down to 3½ by 3½ inches.

The outside dimensions of this frame being equal, it may be reversed in the holder, which is advantageous when making vertical pictures.

Next comes the holder for this frame. This is nothing but a shallow box without top or bottom, and may be made as follows: Get out two pieces of pine 4 by 10 by ¾ inches, and four pieces 1⅝ by 14½ by ¾ inches. Nail these together as in the sketch, so that the frame will slide easily in the opening. Make four small strips to nail inside the box to serve as guides for the frame and at the same time shut off all light which might otherwise enter between the edges of the frame and the sides of the box.

Reference to the sketch will make these points clear.

I am taking it for granted that you have a camera of some sort, preferably of the view variety.

The camera I use is a 6½ by 8½ inches, R. B. front focus instrument, and is well adapted to the purpose.

Now, if you have a camera of this type, proceed as follows: Board over the front of the box, leaving an opening ½-inch smaller each way than the opening in the back of the camera. Put a quarter-inch beading around the opening so that it fits snugly into the place usually filled by the reversible back of the camera. One's ingenuity must be exercised here in adapting the camera at hand, the idea being to get a light-tight joint between camera and box.

You will need to have the use of a room for the work, preferably one in the upper story, with a clear view of the sky, though this last is not absolutely essential. If it has only one window so much the better. This window must be darkened. To do this I found it best to make a frame of pine strips about 1½ by ¾ inches, with corners halved together and fastened with screws. This frame must fit snugly into the window casing, where it may be held by four wood or iron turn-buttons screwed to the casing.

Now, set two cross-bars in this frame, their inner edges 13 inches apart.

Cover both sides of the frame with heavy paper or opaque cloth — anything that is absolutely light-tight. If you use paper, dampen it before pasting it to the frame, so it will be stretched tight when dry.

When the covering is completed cut through the paper between the cross-bars a hole 10 by 13 inches in size.

Now screw the holder to the cross-bars in front of this opening, and make all cracks tight with strips of paper pasted on.

Cut some strips of heavy paper about 6 inches wide and paste them on the inside of the window cover, allowing the paper to project four or five inches. This will aid in shutting off any stray rays of light which might creep in between the window-casing and the frame.

Now, make a sort of shelf or bracket just below the holder box, to support the camera in the proper position in front of the opening. The camera may be placed on this and secured to it by means of a small iron clamp, to be had for a few cents at a hardware store. Fasten a sheet of ground glass on the outside of the opening in the window-screen. Four screws driven into the cross-bars of the screen will hold it in place.

Its purpose is to block out any houses, tree branches, wires or other objects that may be in front of the opening. Without this glass we should get a more or less distinct image of these things upon the bromide paper.

Now we need something to hold the paper during exposure. Get a soap box or one about that size, nail an upright on each side, and on these fix a good flat board — a drawing-board is good — a few inches larger each way than the largest size paper you intend to use. The center of this board should be the same height as the lens of the camera is. Cover the board with white paper. This gives a smooth surface upon which the image thrown by the lens may be accurately focused. A few stones or bricks in the box will hold this improvised easel steady while in use.

One more thing is needed — a cap for

the lens, with a piece of yellow glass in the front. This is needed when pinning the paper to the easel, as will be explained later. To make this cap find the diameter of your lens tube, bore a hole of the same size in a piece of ½-inch pine and then saw out a square piece, leaving the hole in the middle, with about ½-inch of wood on each side. Now get a piece of orange glass cut the same size as this block and fix it to the block over the hole with strips of paper pasted on.

In the matter of trays for this work the back numbers of The Photo-Beacon will give you plenty of hints. Mine are made of ½-inch pine, heavily coated with asphalt varnish.

Now, a few words about the actual work of enlarging: Place the apparatus in position and select a negative that is well exposed and not too dense. One that gives rather a soft contact print will give the best results, as bromide paper tends to make contrast. Right here I may say a word about paper. All the different brands on the market are good and it is merely a matter of choice which of them one uses. I have had very good results from Eastman's "Standard" paper. I keep a supply of both "hard" and "soft" grades on hand and use whichever seems best adapted to the negative at hand. Royal bromide is fine for some classes of work, but don't use it with negatives having too much contrast, as it tends to exaggerate and will produce a harsh print. The sepia tones obtainable with this paper are very pleasing.

Now, to return to our subject. Having selected a promising negative, place it in the holder and insert it in position in the carrier, film side toward the lens. Now cap the lens and examine the apparatus carefully to see that no white light leaks in. A focusing cloth wrapped around the camera and holder will shut off whatever may enter around the joints. When you are *certain* that you have blocked out all the light from the room, draw the easel up in front of the lens and proceed to focus the image on the white paper. This may trouble you at first, but the faculty of "seeing in the dark" is soon acquired. A graduated rule is very handy just here if you wish to produce an enlargement of a certain size. Having secured a good focus stop down the lens fairly well—I generally use about *f*-16—put the yellow glass cap on the lens, and pin a small strip of bromide paper on the easel. Expose it by means of the cap for what you think

Negative by Robert Pritchard, Chattanooga, Tenn.

A COOL RETREAT.

will be the correct time. I should say that with an average negative, and *f*-16, enlarging from 4 by 5 to 10 by 12, three minutes would be approximately correct.

The time depends on several factors, such as density of negative, stop, light, the kind of developer used, and the degree of enlargement; the greater the magnification the longer the exposure. Having found by trial the correct time you may expose a full-sized sheet of paper and proceed to develop.

I think that no developer can excel the old ferrous oxalate for this work. It is a trifle more troublesome to use on account of the acid clearing bath, but if you care for fine tones in your prints you will use it. Royal bromide, however, is not so exacting, but gives about the same tones with any of the newer developers. I use eikonogen, as it is cheap and easy to use.

I might extend this article to a much greater length, for there are numberless dodges in the use of the paper which may be practiced to secure the best results.

However, my purpose was to devote this paper to a description of the apparatus needed to produce an enlargement, and all further hints may well be left until some future time.

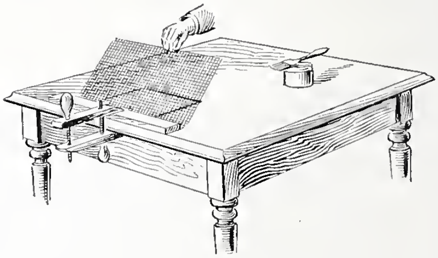
I trust that my directions are clear and such that they can be followed. I have advised nothing but what I have tried myself, so that I can vouch for its correctness, and I hope the hints I have given may be of service to many of my fellow amateurs.

Chester M. Whitney.

TO MOUNT GLOSSY PRINTS.

Those poor amateurs who are not fortunate enough to own a burnisher are doubtless troubled to keep the paste from getting on the face of their prints and spoiling the gloss. I was always troubled this way until I tried the following method:

From an old window screen cut a piece of netting about two inches larger than the size of your prints. Then get two small wooden clamps or vises, such as carpenters use. These may be had at any hardware store for a few cents. If the print is not larger than 5 by 7, one clamp will do. Next get a strip of wood one inch wide and as long as your piece of screen. Lay your print on a piece of marble, a table top, for example. Place the screen on the print. Put the piece of wood on one edge of the screen and clamp the whole to the table. Apply the paste with a brush, holding the screen down with one hand. Now lift the screen and take out the print. The screen will remain up. Clean the table and take the next print.



A. Denton Pratt.

250 Ashmont street, near Dorchester,
Boston, Mass.

PHOTOMICROGRAPHY WITH SIMPLE APPARATUS.

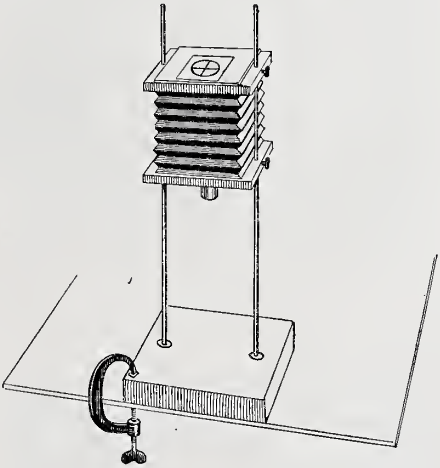
It sometimes happens that the amateur photographer is also the fortunate possessor of a microscope, or has the use of one belonging to a friend. In such cases he often desires to be able to photograph the interesting objects that the microscope reveals, that he may show them to others. This is especially true in winter, when photography out of doors becomes more of a hardship than a pleasure, and photographic diversions somewhat out of the beaten path are in order. Hence the description of a simple apparatus for this purpose may prove of interest.

For the taking of photomicrographs the microscope and camera may be arranged either horizontally or vertically. For one who does not wish to do extensive work in this line, but only to take a picture now and then, the vertical arrangement is perhaps the better one, as the apparatus is more easily set up and can be used at will by either daylight or artificial light. All that is necessary is to have the camera so supported that it can move freely in a vertical plane above the microscope.

The base of the apparatus should be made of a block of heavy wood, about 15 inches square and 2½ inches thick. Into this firmly screw two uprights made of ⅜ or ½ inch brass rod, taking care that they are as nearly vertical and parallel as possible. These uprights should be about 30 inches long if possible, and the distance between them should be regulated by the size of the camera that is available. The camera itself may consist of an ordinary box fitted with an arrangement at the back for holding plates or a ground glass, but a much better arrangement is a regular folding camera with a square bellows. No lens is necessary. The camera is conveniently held to the uprights by four pieces of hardwood, 1¼ inches wide, 6 inches long and 1 inch thick, which are screwed edgewise on the front and back. A hole is bored in the center of each, of such size that it will move easily upon the upright, it being held in place by a wooden or brass thumb-screw. The whole apparatus should be clamped to a table or shelf in order to secure as much rigidity as possible. A general view of the apparatus is shown in the sketch.

Connection is made with the microscope by fastening to the front of the camera a piece of pasteboard mailing tube a trifle larger than the draw tube of the microscope, and about an inch long. This is lined with black velvet so that it fits quite closely over the microscope down to the shoulder, but not so tightly as to interfere with the free vertical movement of the tube in focusing.

The method of using the apparatus is perfectly simple. It is advisable, first of all, to mark on the base of the apparatus the position which the microscope should occupy in order that the pasteboard adapter on the camera shall descend directly over the draw-tube of the microscope; also to mark on the uprights the position of the ground-glass when it is illuminated by a circle of about the desired size. Then to photograph an object, the microscope is placed in proper position on the base of the apparatus. The length of the uprights allows the camera to be raised far enough to be out of the way while looking through the microscope to adjust the mirror, condenser, etc. It pays to be rather particular about the lighting of the object, since this is one of the most important factors in securing good results. When all is ready, the camera is lowered to its proper place and the adapter drawn down over the microscope. With low powers, the focusing can be done well enough directly on the ground-glass, but for higher powers it is better to use a focusing glass or an eyepiece. After focusing, insert the plateholder and make the exposure. The proper time to give can readily be found by trial.



The source of light may be either daylight or artificial light. Most of my work has been done with daylight, but good results can also be obtained with a Welsbach burner or with an ordinary kerosene lamp, using a metal chimney and a bull's-eye condenser to reflect the light into the mirror. The use of artificial light of course necessitates a longer exposure; just how much will be found by experience.

Almost any kind of plate can be used, but for most purposes a rather slow

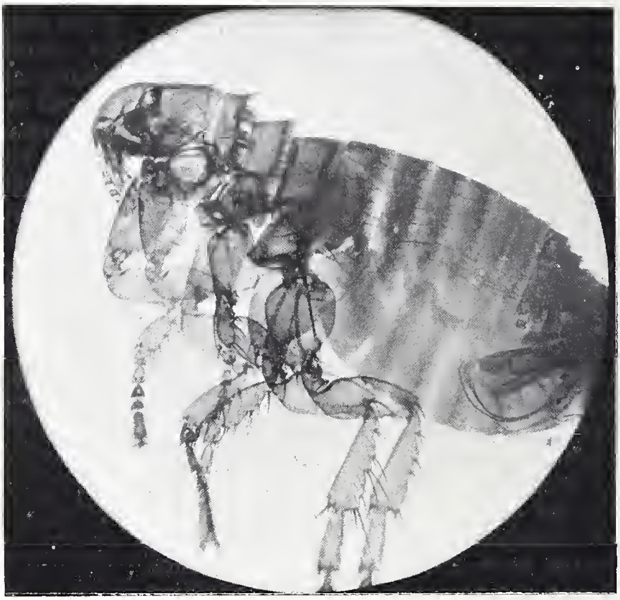


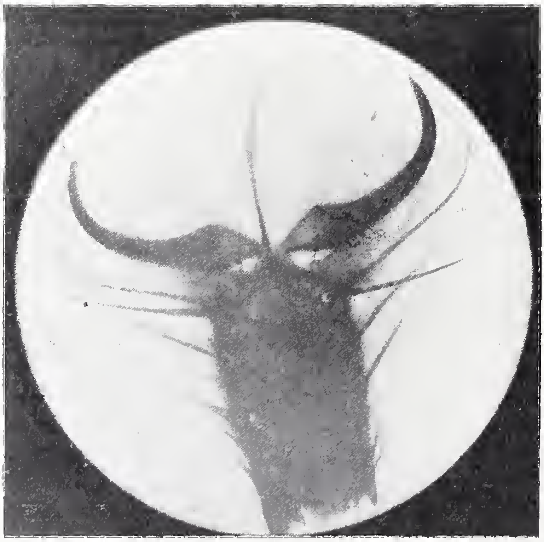
plate is best. I have obtained good results with both the Seed 27 and 26. For some objects an orthochromatic plate with a color-screen will give the best results.

The development should be rather slow, and it is best to use a developer that gives rather contrasty effects, as microphotographs are apt to be rather flat unless skilfully lighted. For printing, I think there is nothing better than Velox, especially the glossy variety. It is easy to work, gives good contrast, and if squeegeed on a ferrotype plate will bring out the minute detail very nicely.

The illustrations which accompany this article were made about the middle of a bright sunny afternoon at a window with north light. Using a Seed 27 plate, the exposure given to No. 1 was ten seconds and to No. 2 fifteen seconds. No. 2 was yellowish-brown and quite opaque.

A. G. Woodman.

Essex, Mass.



Mr. E. W. Newcomb announces his withdrawal from the editorship of the *Photo-American.*

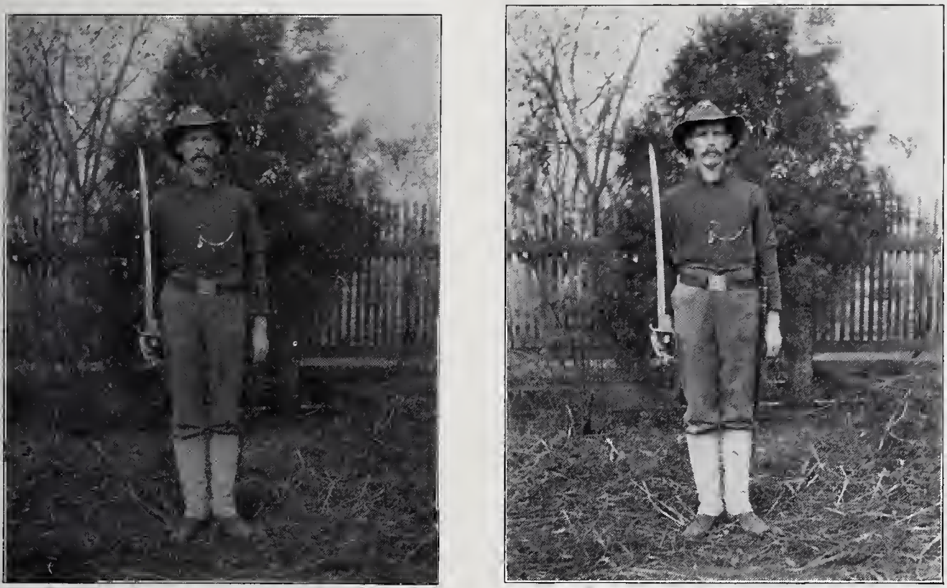
SOME FINE NEW EMBOSSED IMPRINTS.

We were last week shown a series of new embossed imprints which the A. M. Collins Mfg. Co. has just originated. They are a rather radical departure from some of those in former use, being smaller and embodying shield and crest designs of exceeding attractiveness. The modern photographer has found it profitable to become critical regarding the appearance of the imprints which he uses on mounts, and to the most critical of modern photographers we recommend the new embossed imprints of the Collins Mfg. Co. Like Collins card mounts, they have an air of aristocratic exclusiveness that has come to be considered a valuable asset.

The Pittsburg Amateur Photographers' Society announces that the Third Annual International Salon and Exhibition will be held in the Carnegie Art Galleries, Pittsburg, from May 17 to 31, 1900.

INTENSIFICATION.

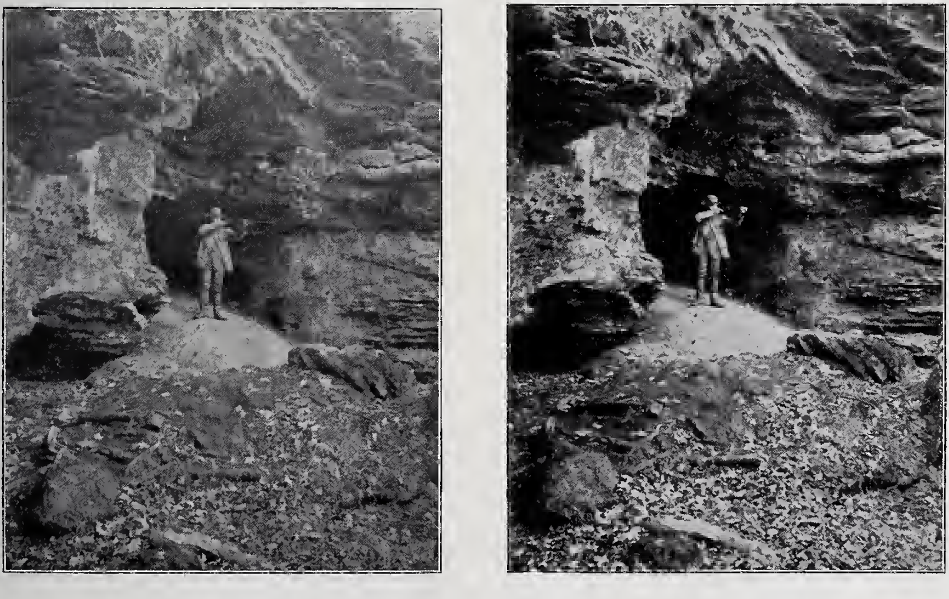
I am greatly indebted to The Photo-Beacon for putting me to work in intensification, and am surprised and pleased with the results. Negatives that I have laid aside as useless can be made



Before Intensification. After Intensification.

FIRST PRIZE.

Negative by Miss M. Hornback, Dorsey, Ill.



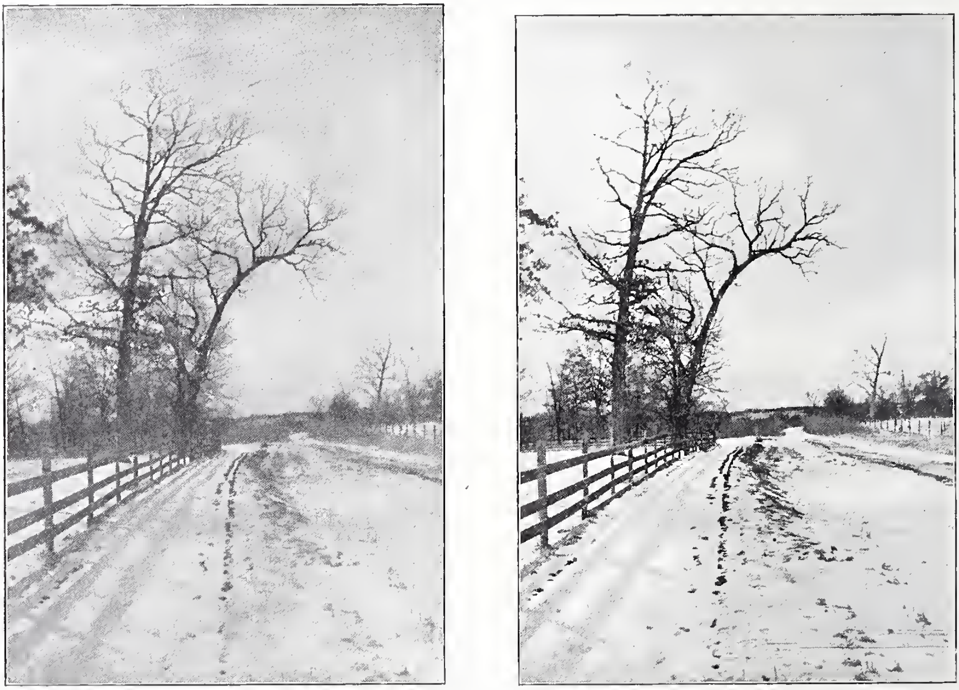
Before Intensification. After Intensification.

SECOND PRIZE.

Negative by Frank E. Foster, Iowa Falls, Iowa.

to yield presentable prints, and I have thrown many thin negatives away that ought to have been saved.

In proceeding with this work I have followed the directions given in Part 2 of the "Reference Book of Practical Photography," paragraph 304. I used a 16-ounce bottle for convenience, and proceeded as follows: First I made up a saturated solution of bichloride of mercury and let stand a day, frequently shaking. Next I put in a 16-ounce bottle 8 ounces of warm water, and dissolved in this 1 ounce of iodide of potassium. Into this solution I poured slowly the solution of bichloride of mercury until shaking would not dissolve the red precipitate. I then added ¾ ounce of hyposulphite of soda and dissolved by shaking, and filled the 16-ounce bottle with water and let it stand until cold. For intensification I took of this stock solution 2 ounces and added 4 ounces of water. This is sufficient to intensify six 5 by 7 negatives. I soak the negatives half an hour in water and place in tray containing intensifying solution. In a corner of this tray I keep a clean tuft of absorbent cotton. When first putting negative in solution and subsequently after taking out to examine, I rub the film rapidly and lightly with the cotton to break up the little air bells.



Before Intensification.

After Intensification.

THIRD PRIZE.

Negative by E. M. Miller, Des Moines, Iowa.

I judge of the density needed by holding up to a window, and after intensification I wash ten minutes in running water to eliminate hypo.

E. M. Miller.

NOTE ON THE TOLIDOL FORMULA IN MARCH ISSUE.

The Tolidol formula for use with Velox paper that Mr. Burrett gave in our last issue was somewhat vague. Mr. Burrett informs us that he intended to specify that they were dry (calcined) salts and to add that they were also chemically pure.

HOW TO PAINT BACKGROUNDS.

THE PHOTO-BEACON has shown us how to make almost everything needed in photographic work, except backgrounds. I find the painting of mine easy and pleasant, but hard to describe. The materials required are few, cheap and easily obtained. Some pine strips for the frame, some muslin, a dime's worth of ground cabinet glue (any other kind will do), 5 cents worth of whiting, 5 cents worth of dry ivory black, a few tacks, two or three paint brushes (if they have been used in common oil paint clean them well with gasoline) and some tin cans, and you are ready for work.

The handiest backgrounds to have are "headgrounds," for if properly made each can be used either edge up and show a different effect. And again, another one can be made on the back of the frame holding the first one, thus giving eight headgrounds, all different, on one frame. They may be four feet square, or larger. Mine are five feet square, so I will describe one this size.

Make a square frame five feet each way of pine strips 1 by 2 inches, bracing the corners. Solid triangular blocks are good corner braces. Have your cloth this width and twice as long, allowing enough to permit tacking it to the edges of the frame, leaving the face smooth. Tack one end to one edge of the frame, bring the cloth over and tack the other end to the same edge of the frame. Stretch it *tight* and tack every two or three inches all around the frame. The cloth may be shrunk and tightened still more by painting with a saturated solution of alum and water, applied boiling hot. Melt three ounces of glue in one quart of water. I put all together in an old tin can and hang in a kettle of water, and keep it boiling until dissolved. Paint cloth all over with one good coat of this glue water and allow to dry. You are now ready for paint.

I find No. 1 and No. 2 are the handiest headgrounds I ever had, so will suppose you will make them. Make a paint of whiting and some of the glue water, about as thick as whitewash. Right here I will say, always use the glue water to mix your paint with, and if it is too thick with glue to spread well, thin it down. Always use it and the paint hot. Mix some black (a very little goes a long way) and add enough of it to the white to make a light gray. Always remember water-color or distemper drys out very much lighter than when it is wet. Put a full, even coat on one side, but do not rub it in; leave all of it you can on the surface. This side is for No. 1. Add some more black and paint the other side darker for No. 2. When dry, which will be quite soon if you use the paint hot, paint with pure white and pure black the places in the center of each headground. Notice that but very little is pure white or pure black, and that there is no pure black in No. 1. Now for No. 2, put a little black in the

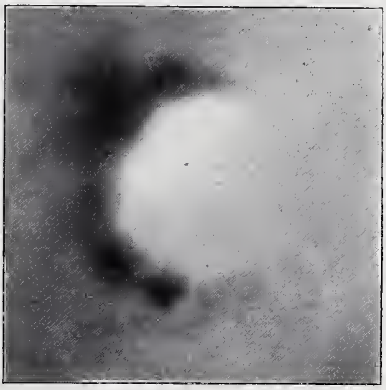


FIG. 1.

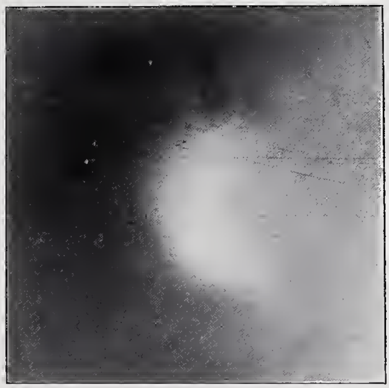


FIG. 2.

white and paint a narrow strip around the white on the side next the edge of the frame. Add more black and put a strip around outside the last, continuing the process until the edge and top and bottom are reached with a medium dark gray. Put a little white in the black paint and paint a strip around the black spot. Add more white and paint another strip, and so on to the edge, finishing with a much darker tint than the opposite edge.

Now you are ready for the "blender." The best thing for this is a worn-out stub of a 2-inch or 3-inch oval or round brush, very stiff. Trim the bristle flat and square on the end. A sponge or even a rag wadded up will do in case no brush can be had. Wet the blender slightly in the glue water and with a light touch and a circular motion go over the edges of each strip of paint and rub one color into the other until all is smoothly and evenly shaded off. The clouded effect in No. 1 is obtained by "dabbing" the black brush on the surface, making spots of dark, and then blend the edges of each spot. Blend the joining of the white and black in No. 2 very little—just enough to spoil the hard line of connection. Have the light edge of No. 2 darker than the dark edge of No. 1, so they will give an effect decidedly different. The painting of No. 1 is the same general work as No. 2.

Should you want a larger one for full-length portraits you can paint it the same way. These are best mounted on a roller. Tack the cloth against a smooth wall and when painted mount on roller. Proceed as with the head-ground, only omit the first coat of glue water, as that would make the paint crack when rolled. After the first coat is dry outline the scene with chalk and fill in with white, black and different grays, blending where needed. Be very careful not to have any large surface all one tint. No matter how light or how dark the general tone, have some gradation in it. Should you want a scene in natural colors use the glue water and the different pigments needed, just the same as the whiting and ivory black. I do not find a colored background any advantage in my work. In any case, if your first attempt does not suit you (and several of my first attempts did not suit me) you can paint another coat right on top of the first one (if on a frame) and try again. Let me warn you again, *don't* bear on too hard with brush or blender, and *do* have the whole head-ground or background full of gradation.

A catalogue of backgrounds from your dealer will give you models for anything you will be likely to need. If not, then some of your photographs probably will. With a little patience you will be sure to succeed.

Frank E. White.

Toulon, Illinois.

THE MILWAUKEE EXHIBIT.

It would seem especially fitting that the Photographers' Association of America, the official spokesman of the profession, should uphold the dignity of photography. That portrait photography is rapidly advancing is well known. Its artistic capabilities have never been so well understood and acknowledged as they are at the present time. It has been a matter of regret to many that the average of the work exhibited yearly at our conventions is not of as high a standard as we should expect to see, when we consider the high average skill of the American photographer. It may or may not be due to the policy of scattering medals broadcast; of permitting one standard of excellence in one locality and another standard in another locality. If a national association means anything, it means a common meeting-ground, where all must compete on an equal footing; a manifest impossibility when geographically divided. The most important issue, however, is, shall the association stand for all that is best and most elevating? It can have no lasting influence otherwise. Its yearly exhibitions should be, and must be, a representation of the progress of the year. It should be able to say to its members, Here are the ideals of photography. You must come to this fountainhead if you want the true knowledge. To turn from generalities to something specific, let me say, that in providing for a hanging committee to pass upon exhibits, the Executive Board have added mightily to the dignity and prestige of the National Association. Who can gainsay the added interest of such an exhibit to the visitor, and the greater opportunities it offers for study. It is unfortunate that much of the talk and discussion in relation to the "new" and the "old" schools, and the sneering allusions to "Freak Photography," have made it appear that many of our best workers are opposed to the artistic advancement of portraiture — a most erroneous impression. Possibly some of the flings at "freaks" have been inconsiderate, certainly they have been justified by some of the "attempts" of some of the would-be reformers. It is the fool friends (as usual) of the new movement who have made all the disturbance. Some very able lectures or talks have been arranged for, that will be prepared for the special purpose of throwing light on that much-abused question, How to Apply Art Principles to Photography. Never has the association had so commodious and convenient a building for its purpose as the Exposition building at Milwaukee. It contains a series of art galleries with top light, in which the exhibits will be hung.

Negative by John H. Pratt, Chicago, Ill.

A FROSTY MORNING.

Pictures will be judged by daylight, a fact that exhibitors will do well to bear in mind. It is the earnest desire of the Executive Board to have the National Association the exponent of all that is best in photography. We appeal to all who are in sympathy with us for your exhibits and your presence.

Geo. B. Sperry,
First Vice-President, P. A. of A.

Dear Sir, — The photographs by James Patrick, reproduced in the January Photo-Beacon, are certainly fine. It must give you great pleasure to publish such beautiful views of "Old Scotland." William H. Brown.

STUDIO IN THE BACKYARD.

ROYALTON, MINN., Feb. 15, 1900.

Editor of THE PHOTO-BEACON: The articles on "How to Build a Studio Suitable for an Amateur" have interested me very much. As you invite others to write on the subject, I give my opinion of the two plans published.

The Nelson plan is a good one in general, but has some faults which can be easily corrected without departing a great deal from the original details. In his desire to reduce the expense, the author has fallen into the error of too much economy in first cost at the expense of strength in the finished building. To correct these faults I would make the following changes:

1. Use more rafters and studding, placing 18-inch centers instead of 36 inches.
2. Place four cross-ties from plate to plate, instead of three.
3. Place support under joists through center of building.
4. Have light at least four feet from back wall.
5. Use shingles for roof.

I have seen a paper roof as described by Mr. Nelson that did good service for two years, but would advise shingles for a permanent roof.

The estimate says the paper for the roof will cost $5, shingles would cost $10.

The additional lumber required for the frame as changed would cost about $5, making a total increase of $10 over the original estimate. With these changes I believe but little fault could be found with a building of this kind.

The Rawlinson plan I believe is impracticable. The plan calls for 6-foot posts. This would allow (taking off 5 inches for joists and floor) but 5 feet, 9 inches between cross-ties on top of plate and floor.

A door 5 feet 6 inches high, would be two low for an ordinary person to pass through without stooping. Roof boards 10 feet long, without support between plate and ridge, would collapse under the weight of an ordinary fall of snow, especially on a roof as flat as this one.

The bill calls for 160 feet of ceiling to line operating room and office. It would require 600 feet to line the sides of these rooms alone.

Eighty feet of battening is ordered, for what purpose is not stated, but it would not cover some seventy cracks in side walls which must be covered unless matched lumber is used. The bill does not call for matched boards.

From this it will be seen that the plan would not make a satisfactory building for the purpose intended. I do not write this merely to criticise, but with the hope that it will help some enthusiast, who, like the writer, intends to put into practice the subject, "How to Build a Studio Suitable for an Amateur." Yours, sincerely,

F. B. LOGAN.

EDITORIAL TABLE.

The Claw Plate Handle Company, Bay City, Michigan, has favored us with samples of its claw plate handles for holding plates during development, fixing, washing and drying. They are a good thing, and prevent all possibility of development stains on the fingers.

The very latest addition to the kodak family is "The Brownie Camera," a very perfect little instrument that retails at the extremely reasonable price of $1. It is built on the plan of the box cartridge film camera, which is so well known in the Bull's-eye Kodak; in fact, it is practically a miniature edition of that instrument. It takes a roll of six exposures 2¼ inches square. In some of its minor points it is a marvel of mechanical simplicity, and in its bigger features it is a reproduction of the Bull's-eye. The workmanship is just as excellent as in larger instruments, and we feel sure it will have a tremendous sale.

The very first of the new season's catalogues to reach our table comes from the Rochester Optical Company. In get-up — printing, paper and half-tones, it is a beauty. About the contents we need not say one word — it is all about Premo goods, and our readers know they are good enough for anybody.

"The Photo-Beacon Exposure Tables are worth their weight in gold, but they sell for 25c.

PICTORIAL COMPETITIONS FOR 1900.

Competition No. 24.—Local intensification. Closes April 30.

Competition No. 25.—Pictures of children under seven years of age; not necessarily portraits. Closes May 31.

Competition No. 26.—Reduction. Closes June 30.

Competition No. 27.—Flower pictures. Closes July 31.

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NOTE.—Methods of performing the various operations are to be found fully described in Part II of "The Reference Book of Practical Photography." In No. 32, ray-filter competition, send one print made with ordinary plate, and one on color-sensitive plate with color screen.

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Home Hobbies, Arts and Crafts

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CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER,

INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

SOMETHING ABOUT PLANES.

Replying to letters written to this department in regard to the different kinds of planes and their uses, and also answering the question of what plane to use, first for a rough piece of board $\frac{7}{8}$ by 8 inches by 3 feet, we would say that the first plane to use for rough stock would be the jack-plane, a plane 14 to 15 inches long, as it is designed for coarse work, such as the writer asks about. The piece of board spoken of has rough saw-marks and many little irregularities, in other words, it is full of little hollows (Fig. 1). Now, in order to reduce the prominent irregularities, a long plane like the jack is more reliable than a short one for such work. Many wood-workers sharpen the blade of the jack-plane, as is illustrated in Fig. 2. The curved edge projects farthest, and will cover the surface of the board with very shallow wide grooves, which are reduced to a perfect level by using the smooth plane set very fine.

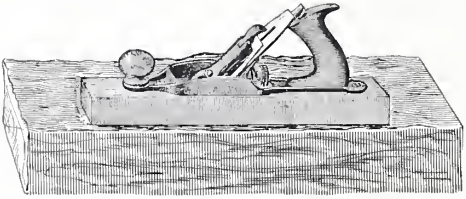

Fig. 1.
This shows an instance of uneven wood being operated upon by a jack-plane.

Other wood-workers have the plane blade or cutter ground as illustrated in Fig. 3, and by turning the lever K (shown in the sectional cut, Fig. 4) to one side. This throws about one-fourth of the cutter below the surface of the "sole" or bottom of the plane. Such a method enables one to make a heavy cut that speedily reduces the irregular surface of the wood.

As the writer wants to know all about a plane, we will give a careful explanation of all the parts, their names and uses. Perhaps the best way will be to refer to a cut furnished by one of the large manufacturers of planes, giving a sectional view of the jack-plane with each part named.

The plane blade (A) is of equal thickness throughout, tempered and ground, and is sharpened for immediate use when sent to market. The cap-iron (B) is also made from steel and is fastened to the plane-iron by an adjustable screw near the center.

The iron lever (C) is held in place below its center by the screw (E), which acts as a fulcrum, and the lever may be readily clamped down upon the irons by the use of the thumb-piece and cam (D). When the thumb-piece is turned upward and the cam ceases to bear upon the irons, the lever may be removed from its place and the irons released without turning the screw (E), as the lever and irons are properly slotted for this purpose.

The pressure required for the best working of the plane-iron can be easily obtained, by driving or slacking the screw (E).

When the plane-iron is secured in its place, by using the brass thumb-screw (F), the lever (G) is easily operated to drive or draw the iron, and thus the thickness of shaving to be taken from any work may be regulated with perfect accuracy.

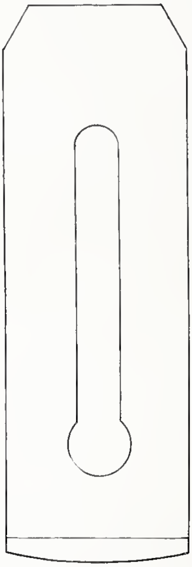

Fig. 2.

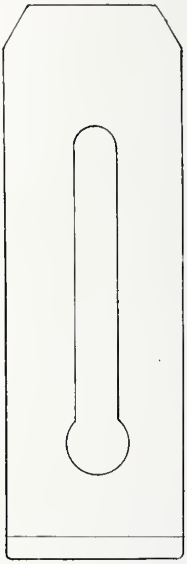

Fig. 3.

By means of the lever (K), located under the plane blade, and working *side-wise*, the cutting edge can be easily brought into a position exactly square with the bottom of the plane, if any variation should exist when the plane blade is first clamped down. The revolving disk on the lever prevents all friction.

By use of two screws in the base of the iron bed-piece — one of which is shown (H) — the bed-piece can be moved forward or backward sufficiently to open or close the mouth of the plane, as the owner may desire.

The question is asked about two pieces of metal locked together, and their uses. The lower piece, A, the one with the beveled edge, is the cutter. The upper one, B, that has a curve near the end, is the "cap-iron" or "chip-breaker." Its mission is to prevent the splitting or tearing in front of the cutter. (See Fig. 5.) It snaps the fibers and diverts the course of the shaving as soon as it begins to run up the face of the cutter. (See Fig. 6.) In other words, the shaving is caught by the "cap-iron," and bent forward before it has time to become a lever. As our jack-plane is designed for coarse work or removing this rough outside of our board, we should set this cap back from the cutting edge of the blade one-eighth of an inch. And *be sure* it is on the side opposite the bevel of the cutter.

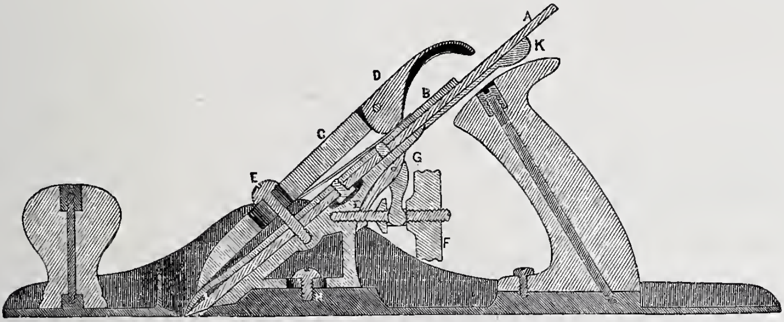

Fig. 4.

For fine work when we use the smooth plane we must set the cap very close to the end, $\frac{1}{32}$ inch for ordinary work and $\frac{1}{64}$ inch for fine work on hardwoods. With such woods as curly maple, curly pine or poplar, quarter-sawed oak or sycamore, it will be best to take the plane apart and loosen the screws, H, Fig. 4, and push the "bed plate" I, forward toward the "mouth" or "throat" of the plane. Then set the "cap-iron" very close, not over $\frac{1}{64}$ inch. Our plane now will act almost like a scraper, the shavings will be so fine.

All tool catalogues show the various sizes of smooth planes, ranging in length from 5½ to 10 inches, and different widths.

BLOCK PLANE.

Block planes are the smallest of all iron planes and are made in about a dozen styles, ranging in size from one 3½ inches long, with a cutter 1 inch wide, to a "double-ender" 8 inches long, with a cutter 1¾ inches wide. This "double-ender" has one set of cutters with two slots and cutter seats. It can be used as a regular block plane or to plane close up into corners and difficult places where an ordinary plane would not reach. Block planes are used largely for planing across the ends of boards or of blocks and in fitting close joints. The pitch of the plane iron in a block-plane is 25 degrees, while in an ordinary plane, that is, a smooth, jack, or jointer, it is 45 degrees. Another difference is that in a block plane the cutter is used with the bevel uppermost at the cutting edge to further aid in cutting across the grain, while in the ordinary plane it is placed opposite, or bevel down.

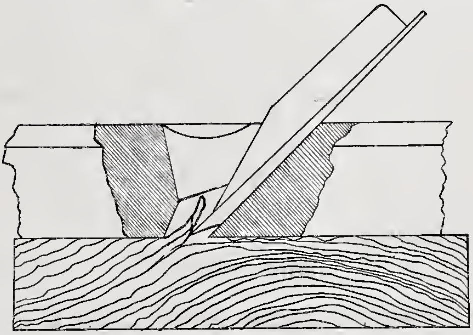

Fig. 5.

Section of a plane fitted with single iron, and showing tearing of the wood.

FORE PLANES.

Fore planes are about 18 inches in length and are a go-between the jack and the jointer. They can be used in place of either, but would not make a glue joint on a long board as nicely as a jointer, for the reason that the greater length of the jointer, 22 to 30 inches, covering more length on the board, holds it steadier and planes more evenly for a glue joint.

Perhaps it may be well to state just here what we mean by a "glue joint."

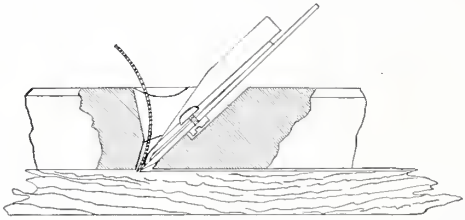

Fig. 6.

Section of plane fitted with double iron, showing breaking action of cap-iron on the fiber of the wood.

It is a joint so closely fitted between the face edges of two boards that when it is glued, it is often difficult to find it, as in making the top of a table, for example. To return to the original question. A fore plane would not be as good a plane to use first on the board the questioner speaks of as a jack-plane, for the reason that the former is longer, wider and heavier, and would require more strength. It would do the work but with the above objections. If we were limited to one plane out of the three — jack, fore or jointer — we would choose the jack, for in most cases it could do all the work spoken of.

OTHER PLANES.

There are special planes for all kinds of work, from a tiny plane that could be concealed in the hand, used by piano-makers and on parts of violins, to the huge coopers' planes a few feet long. There are iron planes with corrugated bottoms to reduce friction, etc., combined rabbet and block planes that have a detachable side with the cutter set on askew, and the Universal plane, with fifty-two cutters, for all kinds of fancy shapes and all kinds of work. This takes the place of the numberless old-style wooden-stock planes that could be used for only one thing.

CUT AND DIRECTIONS.

If the plane "chatters" when at work on a piece of hardwood, give the screw E a half-turn, making it tighter, and it will be found that the trouble is overcome.

Many old wood-workers prefer the wooden stock instead of the iron, for the reason that the wooden wedge which takes the place of the lever C, Fig. 4, in the iron plane, can be driven tight and thus prevent chattering. Another reason is that the cutter in the old style wooden plane is much heavier than in the modern plane.

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THE PHOTO-BEACON.

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Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of The Photo-Beacon Company.

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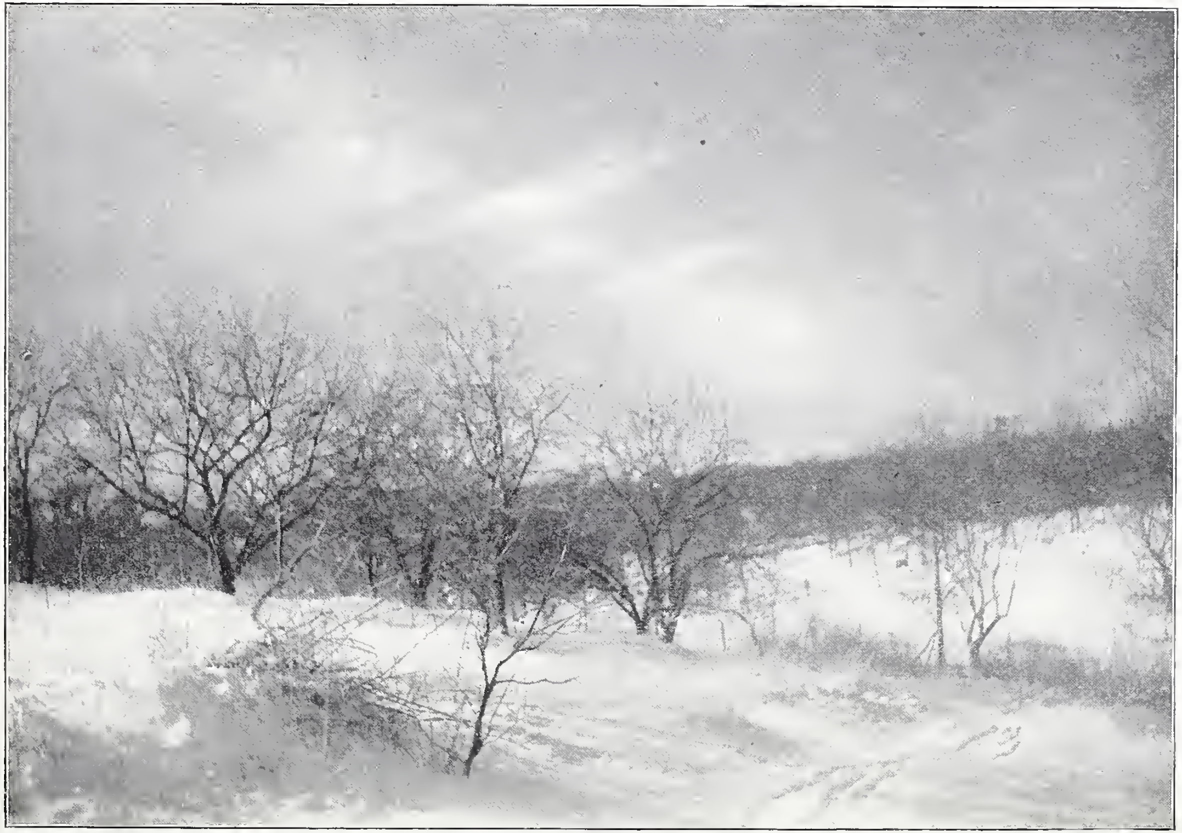

Negative by E. M. Miller, Des Moines, Iowa.

WINTER.
(First Prize.)

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. MAY, 1900. No. 5.

THE CHICAGO SALON.

It was our intention to review in this number very fully the pictures exhibited at the Salon, and in fact have the article in type, but the various exhibitors have been kind enough to give us permission to reproduce specimens of their work, and we think it would be better to print pictures and criticisms together. We have selected over fifty pictures for reproduction, and we fancy our readers will pardon us if we give them in June what will be practically a picture number. It will be in many ways the most unique photographic journal ever issued, and those of our readers who buy off the news stand or from dealers had better give special orders to their merchant to insure getting the number.

PICTORIAL COMPETITION No. 23.

Close on to two hundred prints were sent in to take part in the snow pictures competition. Of these one dozen were very good, and the judges had difficulty not only in selecting the prize-winners, but in arranging them in order of merit. The awards were as follows:

First Prize — E. M. Miller, 3621 West Grand avenue, Des Moines, Iowa.

Second Prize — F. K. Lawrence, 65 State street, Chicago.

Third Prize — S. L. Gates, 172 Adams street, Chicago.

Particulars of the winning pictures:

First Prize—Taken February 15, 1900, 10:30 A.M.; atmosphere clear and bright; stop *f* 8; Cramer's medium Iso. plate, with Poco color screen; exposure 5 seconds.

Second Prize—Taken February, 1900, 11 A.M.; bright sunlight; stop *f* 32; Seed non-halation plate; exposure ½ second.

Third Prize — Taken end of February, 1900; bright day; stop *f* 16; exposure $\frac{1}{25}$-second; Wuestner plate; printed on Special Rough Velox.

PICTORIAL COMPETITIONS FOR 1900.

Competition No. 25. — Pictures of children under seven years of age; not necessarily portraits. Closes May 31.

Competition No. 26. — Reduction. Closes June 30.

Competition No. 27. — Flower pictures. Closes July 31.

Competition No. 28. — Local reduction. Closes August 31.

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Third.—Books to the value of $1.
To be selected from our catalogue.

LITERARY COMPETITION No. 13.

Our literary friends seem to be improving in quality all the time, and the difficulty with the poor editor now is to reject any part of the bountiful fare spread before him. As a matter of fact we now have enough matter on hand to keep us going for about four months, and so we think it will be wise to call a vacation in these competitions during the hot weather. Therefore Competition No. 15, due May 15, will be the last until October, when Competition No. 16 will fall due. In the meantime let our readers turn their attention to our Cover Competition.

First Prize — E. M. Miller.

Accepted (not arranged in order of merit)—Thomas Young, W. G. Howard, W. Marshall, Francis Carver, C. L. Morey, C. E. Chapple, Jr., E. G. Stockert, D. D. Smith, E. C. Sprigley, F. M. Garden.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

RULES.

1. Write on one side of the paper only.

2. Be brief, sending less than one thousand words, if possible.

3. Never mind style — use the smallest words you know.

4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.

5. Write your name and address at the end of the article.

6. Mark the envelope "Literary Competition."

7. Preference given to practical articles, that is, those that tell "how to do things."

SPECIAL COMPETITIONS.

In the special competition, "How to Organize and Conduct a Camera Club," the first prize was awarded to O. Von Engeln, 140 La Belle street, Dayton, Ohio.

The best article on the Darkroom Lamp was sent in by C. J. Korndorfer, 16 Broad street, New York city.

Mr. S. H. Hutchings announces that he has organized the Western College of Practical Photography, at Marshall, Missouri.

KODAKS AT THE PARIS EXPOSITION.

Rochester, N. Y., April 10, 1900.

F. Dundas Todd,
Editor Photo-Beacon, *Chicago, Ill.:*

Dear Sir,—We have just been notified by our Paris branch that kodaks will be admitted to the Exposition grounds free of charge, and can be used throughout the day. Tripod cameras will be allowed on the grounds only until 1 o'clock in the afternoon and will only be admitted upon presentation of a written permission, which must be obtained from the commissioner-general and must be paid for. These tickets of admission will cost the photographer 25 francs per day per apparatus. Season tickets will be issued for tripod cameras on which must appear a photograph of the person receiving them, the charge for said season ticket being 1,000 francs.

Moral — Take a kodak with you.

If, in your opinion, the above information will be of interest to your readers you are, of course, welcome to it for publication. Yours truly,

Eastman Kodak Company,
By L. B. Jones.

A POSTAL CAMERA CLUB.

The subject of a camera club is one that has interested me for some time from an outsider's standpoint. Practically there are two kinds of clubs: First, the members of which live in same city or town and are personally known to each other. Second, the members of which are in majority non-resident, possibly all States in the Union represented and only known to each other through medium of paper and pen. Of this latter class only shall I write.

I would suggest an insertion be placed in The Photo-Beacon asking for name and address of any or all who would desire to become members of a camera club. The requirements being, at least, a nominal membership fee, a desire to profit, and a subscriber to The Photo-Beacon. Surely any one interested in photography sufficiently to join a club would be a subscriber to some periodical devoted to that subject, and where could he do better?

From applications let our enterprising editor, who is in position to know who is best fitted for the place, appoint president, secretary and an associate editor, the latter to represent the club each month in the columns of its official organ. Of necessity it would be best that the officers be where they can easily communicate with each other to plan the work, and, if numbers are sufficient, organize a local club and hold meetings as frequently as desirable, the work of which I will not detail.

Names and addresses of all members should be sent each member at least quarterly, that acquaintances may be formed.

Work should be planned. Have an aim and work to it as nearly as possible.

Communications be solicited, views and ideas exchanged, questions asked, and each member consider himself an active member, called upon to do something for the benefit or entertainment of others.

No one who has handled any kind of a camera but has observed something about which he would like to ask some question, or has made some discovery that would be of interest to others. Why not talk over what interests you with your amateur friends?

Neg. by Jas. E. Taggart, Lewis Center, Ohio.

THE RABBIT'S HAUNT.

Articles for publication should be sent to associate editor for criticisms, and, as far as consistent, articles should be published, for what would seem simple to one might be of material benefit to another. Much will depend on the officers. He who can obtain most from the masses from which to cull every month will secure most good for the club.

The object of such an organization should be for benefit and pleasure with those who are interested in like pastime, and surely among the many amateur photographers are those who are capable of giving to us weaker ones words of wisdom and experience.

Yours truly, FLORA J. GLAZIER.

[In connection with the above, if those desirous of belonging to such an organization will send their names to the editor, he will gladly help all he can to start it agoing.]

HOW TO MAKE A TRAY FOR TONING BROMIDE PAPER IN A HOT BATH.

From lumber ½ inch thick cut two pieces 22 inches long and 4 inches wide, two pieces 17 inches long and 4 inches wide. Use these for the sides and ends of the tray, nailing the 22-inch pieces to the ends of the 17-inch pieces. For the bottom use a sheet of galvanized iron 22 by 18 inches. Punch holes around the edge of the iron about one inch apart and ¼ inch from the edge and fasten to the frame with tacks. Cover the tray with oilcloth as per instructions in a late number of THE PHOTO-BEACON. This will make a tray 21 by 17, which will be large enough for any ordinary work.

To use this tray, take a common bread pan and fill about half full of water and place over the fire (I use a gasoline stove). Then place the toning tray on top of the bread pan and pour in your toning solution.

The steam from the boiling water will heat the bottom of the tray enough to bring the solution to the proper temperature and will not burn the oilcloth lining. By regulating the heat and using a thermometer in the bath the solution can be kept at the right temperature for any length of time.

J. C.

ON page 133 is reproduced a picture that appeared in one of the annuals a few years ago. It is of an old friend of the editor's, who officed with him for some years, and many inquiries come his way about the old gentleman. Physically and mentally he is as alert as ever, and has more recently endeared himself to all his friends by stripping himself of most of his earthly possessions to redeem the honor of another. Little wonder that all who know him count his friendship as a great treasure.

Negative by Wm. F. Thompson, New York.

AFTER SUNSET ON THE CANAL.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F.R.P.S.

CHAPTER V.

COMPOSITION AND THE ARRANGEMENT OF THE SUBJECT.

The mere photographing of a picturesque scene, however beautiful, if we eliminate the element of chance, will be insufficient to produce a pictorially and artistically pleasing result. The component parts of a picture, be they few or many, must be so arranged or disposed in relation to each other as to form a harmonious whole, and the rules which govern the due building up or arrangement of the picture are called "the laws of composition." It will be, of course, obvious that the photographer will experience far greater difficulty in conforming to these than would be the case with the painter. But, fortunately for the former, these rules are chiefly of a negative character, and although it is necessary that the artist-photographer should be familiar with them, it is by no means essential that he should too rigidly adhere to their tenets. The skilled painter, while observing a so-called "law," can conceal the artifice by which the particular effect he seeks to portray is produced, but the photographer, working on the same "law," may only succeed in producing a result in which the method employed is glaringly conspicuous. It is often said that rules "are only made to be broken," and this is specially true of the so-called "rules of art," which the reader must learn to employ with due discretion and judgment.

It is not within the province of this text-book to discuss in great detail the Rules of Composition. Burnett's "Essays on Art," and kindred works, should be studied, and, if possible, we would strongly advise the student to join an art class and undergo a course of lessons in drawing and composition.

Perhaps the greatest difficulty with which the student will be met will be in the correct translation of the gorgeous colors of nature into black and white. Many failures to secure a pictorial result are due to the failure of the photographic process to correctly translate color values into monochrome. The ordinary plate renders green much darker than it appears in nature, blue much lighter, while reds and yellows are reproduced practically as blacks. Isochromatic, or color-sensitive, plates, are, therefore, for many subjects indispensable, and for landscape work, no less than for skyscapes — their advantages for which I have already pointed out — (Chapter III ante) I regard them as essential.

A complete knowledge of the shortcomings of photography in the rendering of color is indispensable to the student in order that he may know what he may attempt with a reasonable hope of success, and what he must reject. The ability to sketch an effect, though it be in the roughest manner, which it is desired to reproduce, will be found of the greatest assistance in ascertaining how any particular subject will look in monochrome when deprived of the charm dependent upon its color. The greatest care must be taken at all times to avoid being tempted by the beauty of local coloring to attempt the portrayal of subjects which for this reason are beyond the skill of the photographer to do justice to. It is this fact which makes pictorial landscape photography so different from painting, and often renders the advice of a painter, ignorant of the defects of photography, of little practical value to the photographer. Many subjects perfectly possible to the former are quite beyond the skill of the latter, solely on account of the impossibility of correctly rendering color value in monochrome.

It is a good plan to look at the proposed subject through a piece of smoked glass — or a piece of yellow glass — the effect of which will be to lower or weaken the local coloring, and thereby enable a more correct idea of the appearance of the scene to be obtained when deprived of the effect due to its local color.

That artists are "born and not made" is an axiom the triteness of which does

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*Copyright, 1900, by F. Dundas Todd.

not detract from its truth, and thus we constantly find photographers, who have not received any art training, producing work which, when analyzed, is seen to conform more or less to certain rules, of which its producers may be quite ignorant. These rules, so far as they affect the photographer, we will now proceed briefly to discuss — premising that the most important, from the photographic point of view, are those that deal with "line," "balance," and "chiaroscuro" or "light and shade." To the latter we have just briefly referred, but we shall have to recur again to it later.

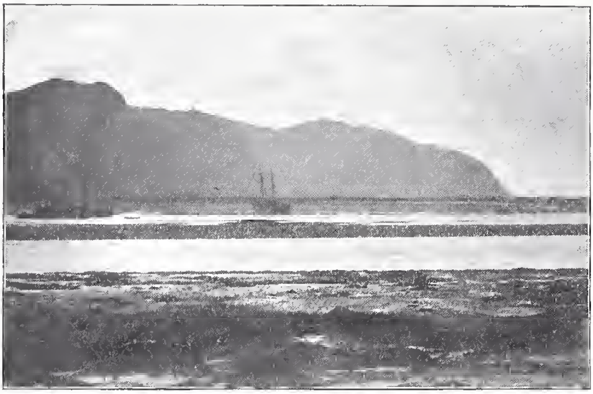


FIG. 14.

If we dissect any picture, be it a painting or photograph, we shall find that the salient or principal parts conform to an arrangement of lines, and the success or failure of the representation, from the pictorial point of view, will depend, in the large majority of cases, upon the disposition of these lines.

This at once brings us to a rule, the non-observance of which is one reason why so many photographs are artistically displeasing. It is a very simple rule in its terms, but to the photographer often a very difficult one to apply: "Repetition of lines should be avoided." Fig. 14 is a rather bad example of a neglect of this rule. The photograph, however good technically, does not appeal to one's sense of the artistic, the reason being that we find upon analysis that the above rule has been disregarded, the picture being built up as it were of a series of parallel lines. The foreground, the vessels, the distant mountains, and even the clouds, may all be represented as so many lines running approximately parallel to each other. The photograph was taken in a locality which certainly is not lacking in the elements of the picturesque; the fault was in the selection of an unsuitable point of view. This reminds us, by the way, that when errors of composition are pointed out to the photographer, one is often met by the rejoinder, "I could not do this, that, or the other; it was impossible to take the photograph from any other point of view." In such cases (and in photography they are confessedly very numerous) there is no alternative; if the subject will not compose satisfactorily, the temptation to expose a plate upon it must be resisted. If this be made an inviolable rule, your work will in consequence be all the stronger.

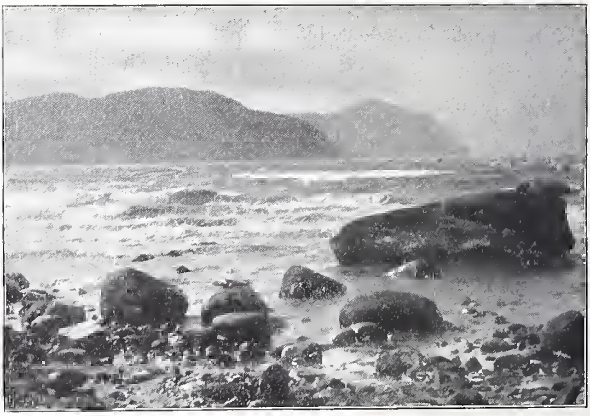


FIG. 15.

The illustration (Fig. 14) is an example of the best, having been made of unsuitable material, but the result is artistically a failure, and except as providing an example of what to avoid, it would have been better not to have made an exposure.

In Fig. 15 we have a much more successful rendering of practically the same subject, and if we apply the same analytical process we find that it conforms to another rule which bears a close relationship to the last. It is that "The general lines of a picture must be balanced by opposing lines." By slightly altering the position of the camera we have succeeded in producing what we may consider to be a fairly artistic result, the reason being that we have obtained such a disposition of the various elements composing the picture as conforms to the last-mentioned rule.

A curved line is always more beautiful than a straight one. Hogarth, it is said, used to demonstrate this by twisting a cane round an elongated cone, and one can not conceive a more apt illustration. A winding road, or stream, will often provide the photographer with the most graceful lines imaginable, and such helps to composition should, whenever possible, be availed of. In Fig. 16 we have a striking instance of how such an element (a rutty, muddy, snow-covered country road) in itself quite without beauty, may be made a strong feature in an otherwise uninteresting subject. Take away the ruts, and leave a smooth, unbroken surface, and the whole pictorial value of the composition disappears.

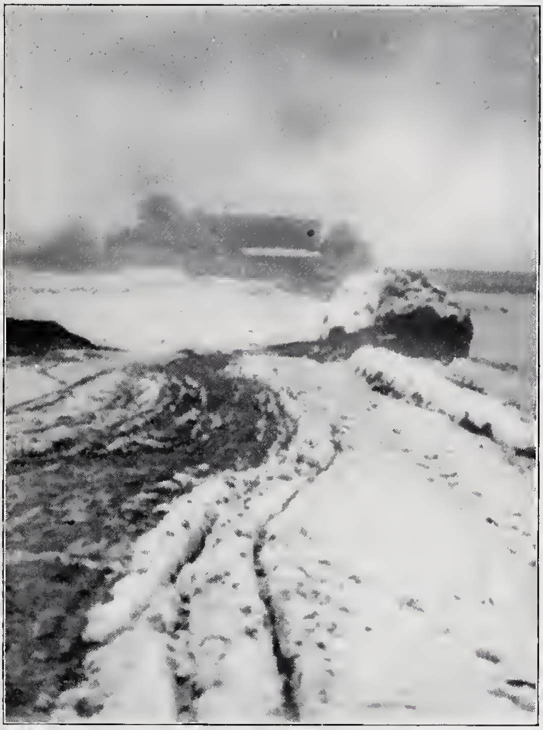


Fig. 16.

Continuing our critical analysis of the composition of a good picture, we shall find that "the wedge" system is one that is very popular with landscape painters, and one that may be adopted with success by the photographer. In using it the greatest care must be taken not to have the opposing wedge-shaped masses equal in size, and also to see that the apex of the principal wedge is suitably supported. In Fig. 17 we have a photograph which has been composed on this principle. Let us critically examine it and see how the rule has been applied. The principal wedge is formed by the canal and the long hedge which runs to its apex just where the stooping figure is placed, which, together with the curved line of the path, give support to the wedge. We have, by the way, endeavored as far as possible to give photographic rather than diagrammatic illustrations of the application of these rules of art, because to photographers we think they will appeal all the stronger.

Every successful picture must have a principal object, to which all other elements of the composition have been subordinated. In photography, where it is so easy to include and so difficult to eliminate, we shall frequently find that all our skill is required to conform to this rule. In observing it, however, we must ever be on our guard not to do so slavishly, or the artifice by which we have produced our result may be apparent, in which case we shall have failed, and that badly, for, as we have already said, the greatest art is in concealing the means by which a given result has been produced.

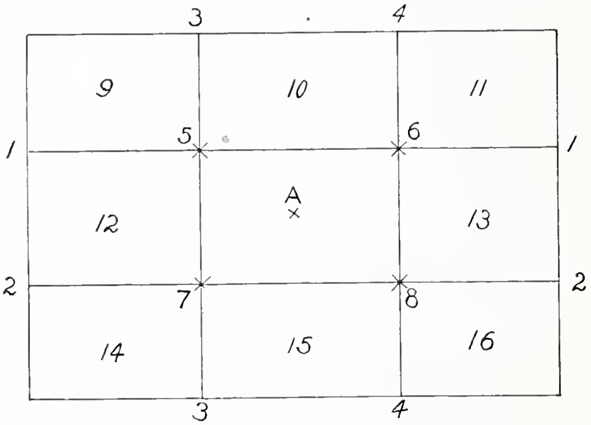


Fig. 18.

In most cases the principal object will derive its chief strength from the position assigned to it in the picture. In general the weakest part of a picture is its center, but to this rule there are exceptions, though a departure from it can only be successfully made under very favorable circumstances, as, for example, when the sentiment or motif is conveyed to the observer with such striking clearness that the mind is unconscious of the transgression of any law.

It is impossible to lay down any positive rule as to the position in the picture which the principal object should occupy, but if we mark out our ground-glass screen in the manner shown in Fig. 18 we shall be able the more readily to determine the weak and the strong points in our pictures. The point of intersection of any two of the lines may be regarded as the strongest points of the picture, i. e., 5, 6, 7 and 8, while the centers of the rectangles 9 to 16 are less strong, the center rectangle A being the weakest part of the picture. The principal mass, or object, should not be placed in the center. If you can not be repeatedly shifting the position of the camera and altering the focus of the lens, to succeed in getting a satisfactory

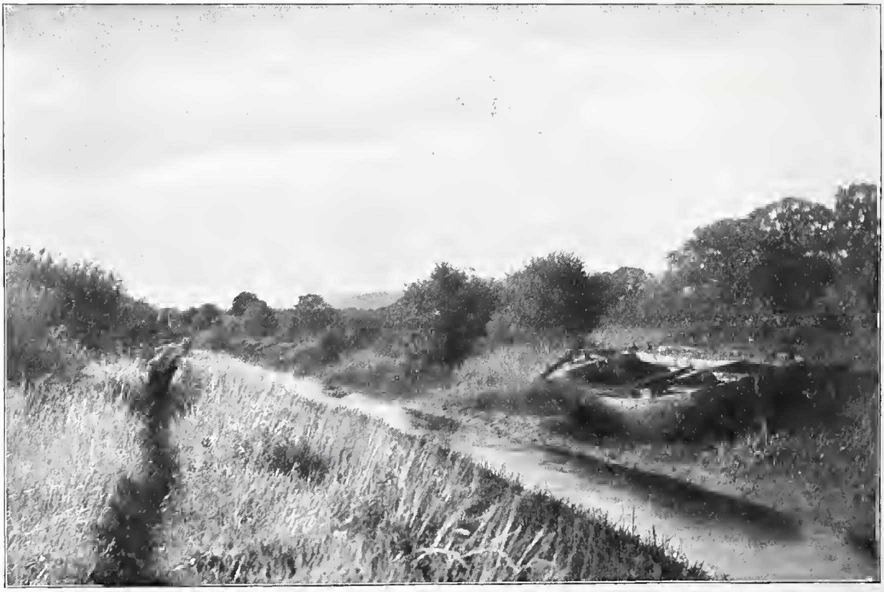
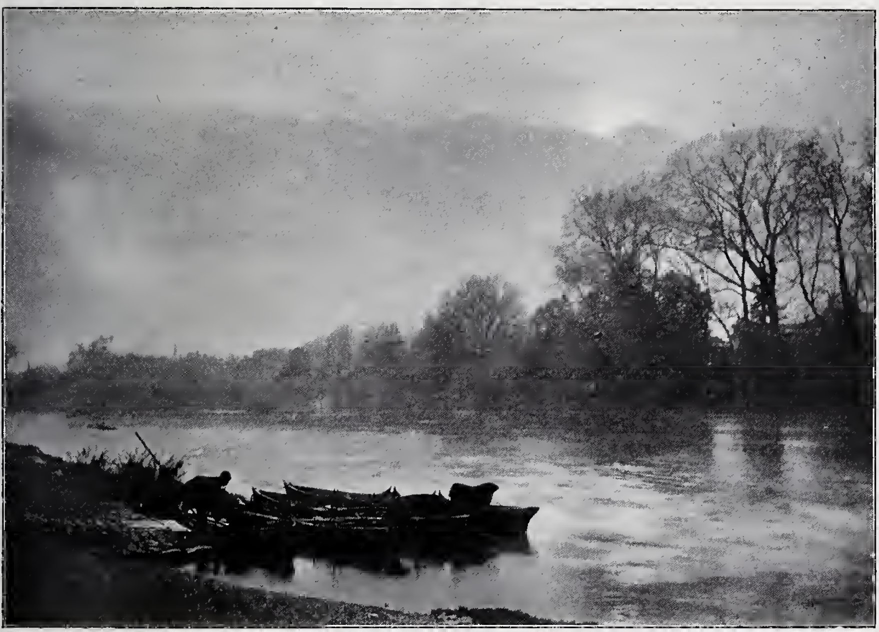


Fig. 17.

grouping of the subject, do not be tempted to expose a plate upon it. But, on the other hand, do not give in without trying every conceivable position. Recollect that success may not always depend upon successful grouping, or a satisfactory arrangement of line ; awkward angles may be compensated for and balance restored by the introduction of suitable clouds, and a picture that transgresses all rules of composition may be saved by a strong arrangement of light and shade.

A modification of the wedge form of composition is the zig-zag, in which the principal lines take the form of diagonal lines zig-zagging, as it were, across the picture. We have an illustration of this in Fig. 19 : "The Day Was Nearly Done." It will be seen that the picture is built up, as it were, on the zig-zag principle ; the line starts from the shore, then runs from the steps to the boats, back to the edge of the picture — a weak spot, and it would have been better to have lowered the camera so as to connect the foreground and distant bank, instead of allowing them to be separated by the water. The zig-zag is continued by the line of the trees, which line is again carried back by the clouds.

(*To be continued.*)



THE DAY WAS NEARLY DONE.

Fig. 19.

It is really astounding to find how alike developers are when care is taken to stop at the same stage of development. In some recent comparisons of six developers : pyro, hydroquinone, metol, glycin, ortol and kachin, using the same formula for each, and measuring results by the H. and D. method, the differences in speed were very slight indeed.

There were great differences in the rapidity with which the developers worked, in the quickness with which density followed the appearance of the image, but if the development was stopped at the same stage in each case — and this was easily done with a knowledge of the multiplying factors — practically identical results were secured with all.

Perhaps the most curious point was that all six were absolutely equal in fogging propensities when no bromide was used.

Alfred Watkins.

ORGANIZING AND CONDUCTING A SUCCESSFUL CAMERA CLUB.

The organizing and conducting of a successful camera club requires the organizer to be its most enthusiastic member. He must give it his time ; and his mind should be occupied with it, above all other things, until the majority of the members get into the habit of thinking for and of the club. Then, first, can he safely say, "I have organized a successful and permanent camera club." How to call the first meeting depends on circumstances. If you have a large circle of amateur acquaintances, whom you wish to unite, a postal, announcing your intention, setting a time and place of meeting, and requesting their attendance, would perhaps be the best way to secure their interest. But if you wish to include the fraternity at large, a notice in the local newspaper, announcing the meeting, and describing the advantages to be derived from such an organization, would be the most practical method of attracting their attention.

At this meeting you should proceed immediately to elect a temporary chairman and secretary. The chair should call for expressions from the persons present as to their opinion of what the club's aim should be. Names should also be suggested, and one adopted. It is always well to use the name of your city or town, as it gives the club a certain prestige.

The chair should then appoint a committee on constitution and by-laws, with instructions to report in from two to three days, for the interest will flag if things are allowed to lag.

The following model constitution will meet most all requirements with modifications to meet local conditions :

CONSTITUTION OF THE PHOTOVILLE CAMERA CLUB, OF PHOTOVILLE.

I.— PURPOSE AND NAME.

Residents of Photoville and vicinity, who are interested in amateur photography, realizing the value of coöperation and exchange of ideas, together with privileges in the way of adequate equipment for such work, hereby associate themselves in an organization to be known as the Photoville Camera Club.

II.— MEMBERSHIP.

1. Any resident of Photoville or vicinity is eligible to membership upon payment of the club fee.

2. The annual membership fee shall be $2, payable in advance.

III.— OFFICERS.

1. The officers shall be president, vice-president, and secretary-treasurer, who shall perform the duties usually devolving upon such officers. The president shall appoint the various standing committees provided for in Article IV.

2. The officers shall be elected annually, at the first regular meeting of the club in May.

IV.— COMMITTEES.

The following shall be the committees :

1. Committee on Rooms, which shall have general supervision of the club rooms, seeing that the equipment is kept in proper condition, that members make proper use of their privileges ; and it shall consider recommendations for additional equipment.

2. Program Committee, whose duty it shall be to provide instructive and practical features for the regular meetings of the club, which shall include practical talks, criticism of work, print exchange with other clubs, and such other features as shall seem wise.

3. Field Day Committee, which shall provide for visits of the club or groups of its members to such places as abound in subjects for photographic work.

4. Exhibition Committee, which shall arrange for at least one annual exhibit and competition of the work of the members of the club.

5. Nominating Committee, to be appointed one week before the election, which shall submit to the club a slate of six officers for its action.

V.— MEETINGS.

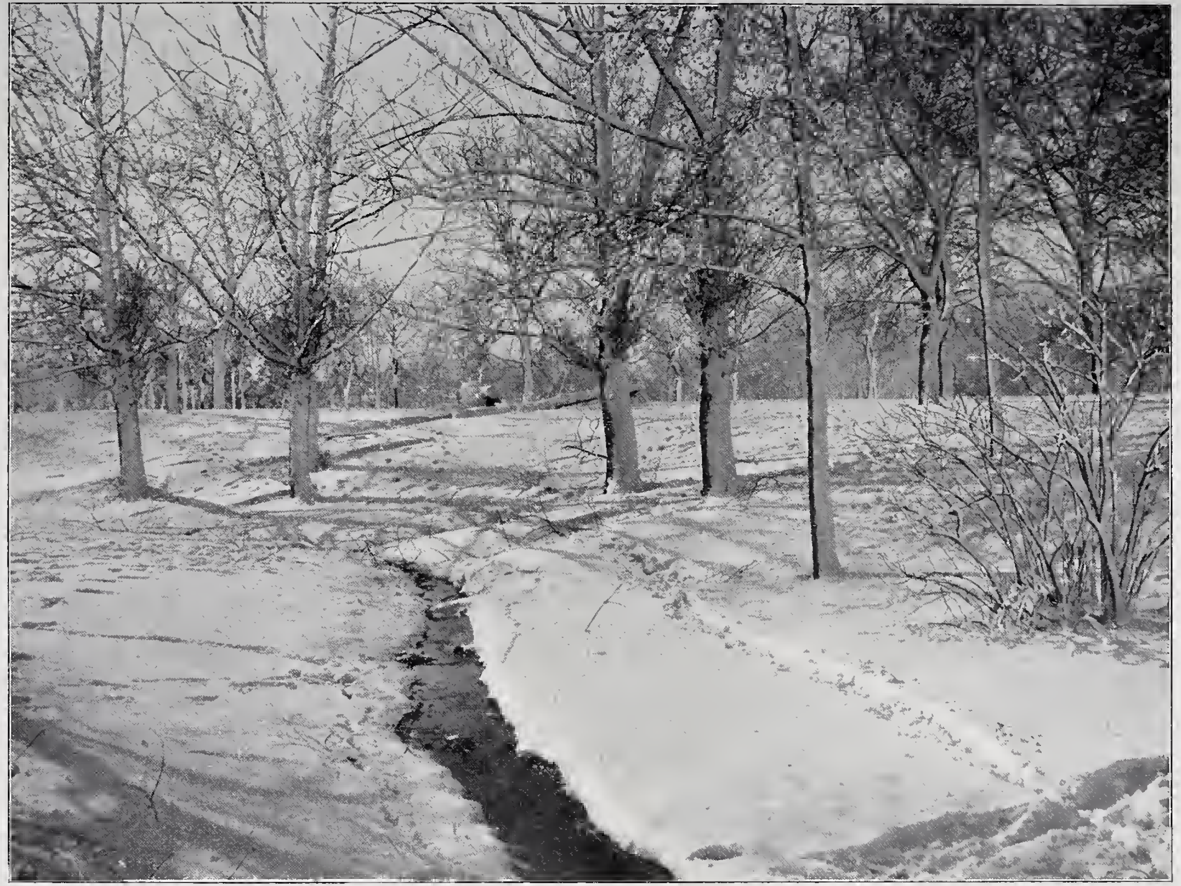
1. There shall be two regular meetings of the club per month, on the first and third Wednesday nights.

2. —— members shall constitute a quorum.

VI.— AMENDMENTS.

This constitution may be amended by a majority vote of the club, with the exception of Article II, Section 1, which can not be amended.

At the second meeting the constitution, as drawn up by the committee, with such changes as may suggest themselves after a general discussion, should be adopted. All those who then sign the constitution become charter members. The temporary chairman should next appoint a nominating committee to report at the following meeting, when the officers for the ensuing year should be elected. The president should at once appoint the various committees,



Negative by F. K. Lawrence, Chicago.

A WINTER NOONDAY.
(Second Prize.)

and the club will be ready for active work.

On the Program Committee will fall the most exacting duties, and the best acquainted, most active and influential members should be chosen for it. However, there is a vast amount of material for them to draw on for practical entertainment.

With a few exceptions professional photographers are willing to help amateurs along by giving talks on development or in criticising prints. A practicing chemist could be persuaded to explain the action of the different chemicals in photography, and the high school professor in physics to give a lecture on lenses, supplemented by blackboard diagrams. If the club be so fortunate as to possess a stereopticon much entertainment can be had therefrom. One unique idea, which is to be a feature of the club I have in mind, is a "Sunset Picture Meeting." All members will be requested, six weeks or so before, to get as many sunset pictures or so-called moonlight effects as they could and bring them to the club on a certain date, when they will be passed around, criticised, and those having the most striking effects asked to explain under what circumstances they were obtained.

A suggestion to the Field Day Committee may not be amiss. By "Memorial Day," May 30, the woods have put on their summer coats of green, and the committee should announce a "Photographic Picnic." At least one member of each couple participating should have a camera with an adequate supply of plates or films, and later should be in shape to show results at the next meeting of the club. If it is a jolly crowd you will be surprised at the amount of fun and also instruction which will be afforded by those pictures.

The Exhibit Committee will be busy three or four weeks before that occasion. Application blanks for space must be printed and circulated, arrangements made for rooms, and, lastly, the pictures must be hung. For advanced workers a salon is more desirable, but an exhibition and competition, with several medal awards, do very well for a young organization. Dealers can be sold space in which to display their wares, which will help materially to pay expenses.

Every club should subscribe to at least one photo magazine. They often contain hints which would be impossible for one person to attempt, with the success which the whole club could easily attain. Personally, I read five or six, of which The Photo-Beacon is one of the most commendable.

Wherever possible, membership to the club should be open to both sexes. It is conducive to better order, and social features can be planned more readily.

A regular order of business should be adhered to at every meeting. Parliamentary rules should be followed as much as possible, avoiding extremes. Business can be disposed of more quickly, and annoying disputes are not so likely to arise if this is done.

In planning a darkroom, for an average-sized club, do not provide room for more than two persons to develop at one time. There will seldom be more; and if there were, they would bother each other to such an extent that none could do good work.

Last, but by no means least, every club should have a "Suggestion Book," to be used as follows: When any member reads, or hears of some good device, or dodge to save time, patience, money, negatives, etc., or to aid in their use, he writes it out in the book, with such diagrams as he is capable of making, or better still, photographs. It will become a bonanza of information, if conscientiously used.

With this I close, believing that, if these instructions are followed out in the spirit, you will have no difficulty in organizing a successful club, provided you have the material.

Oscar Von Engeln.

Both "First Step in Photography" and "Artistic Lighting" are out of print, but there will be thousands on hand in a week or two. Mr. Inglis' book will be issued in paper covers at 50 cents a copy. "First Step" will enter its fiftieth thousand.

DIRECT PRINTING IN COLORS BY THE McDONOUGH PROCESS.

From the International Color-Photo Company, 139 East Fifty-sixth street, Chicago, we have much pleasure in receiving specimens showing their recent advances in applying the McDonough process to presswork, and are pleased to see that they are very much in advance of anything they have hitherto shown. The company is building a press specially designed for this work, and hope when it is completed to make even finer work than they are doing now. This press has four cylinders, one ruling a red line, one a green, and the third ruling a blue, these lines being side by side at a distance of $\frac{1}{300}$ of an inch from each other. A fourth cylinder carries the engraved plate, which prints in black ink over the colored lines. Wherever the ink is deposited of course the picture is black; where no deposit is made, the color shows up, and thus is got the whole gamut of color.

We need scarcely remind our readers that this result is obtained from one exposure on one plate, and one printing of the negative on the copper plate.

The principle is practically the same as applied in the case of their transparency process, of which full particulars can be had from the company. This brings the reproduction of the colors of nature within the reach of the amateur, both practically and financially.

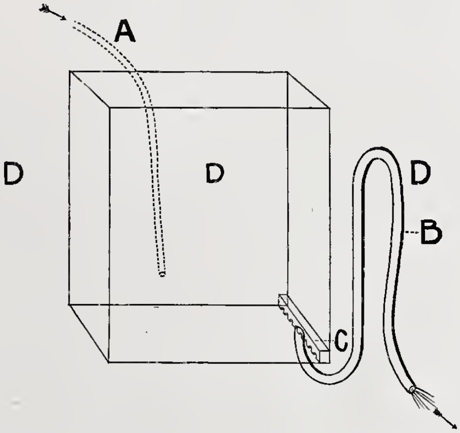
A PRINT WASHER.

There has for some time been in demand a simple and cheap device for washing photographic prints. The plan that I am about to give I believe to be the most practical that I have ever tried.

For the average amateur make a common box about fourteen inches square. Along one of the lower sides let there be placed a small piece of wood 14 by 1½ by 1½ inches, with small grooves in it. These grooves lead to a ½-inch rubber tubing, which runs along up the side of the box (on the outside), thus forming a siphon.

The inlet tubing (A) is ⅓-inch in diameter. The water is started to flow through this tube, and the water reaches a level with the top of the siphon (D); the flow in the siphon then begins, and the diameter of the outlet being larger than the inlet the water supply is soon exhausted. The air then fills the siphon and stops the flow until the former height is reached by the water, when the process is repeated.

The end of the outlet tube should project above the bottom of the box about an inch in order that the prints will not flatten out on the bottom of the box.



The object of the grooved stick is that the prints can not get to the tubing to clog the outlet.

The size of the box, tubing, amount of water in the box, can all be arranged as to one's choice. D. D. SMITH.

BURKE & JAMES AUTOMATIC DEVELOPER.

It is with considerable apology to our feelings that we draw attention to this developer. After covering reams of paper, telling the beginner all about development, and especially to know when to stop, to be calmly walked into a darkroom, to see an exposed plate placed in a tray, to see a solution poured over it, to hear the demonstrator chatting pleasantly while he absolutely ignores the plate, excepting to once in awhile give the dish a rock, and at the end of about ten minutes to have a clean well-developed negative, fixed and ready for the washing tank, placed in our hands, is rather a shock to the nerves. But that is how it goes. The automatic developer is all that it claims to be.

HOW TO MAKE AN ELECTRIC DARK-ROOM LAMP.

An electric darkroom lamp as suggested by a correspondent in the March number of The Photo-Beacon could be made by any one with little trouble and few tools. The mechanical skill necessary would not amount to much and the expense would not be great. The zinc-carbon battery is the best type for this class of work and can be easily constructed. The materials necessary for a battery of sufficient power for a one-and-a-half or two-candle power "battery lamp" will be three glass tumblers measuring about 2½ by 3½ inches inside, at 4 cents each, six pieces of carbon 1½ by 3¼ by ¼ inches at 3 cents each, three pieces of zinc 1½ by 3¼ by ⅛ inches at 5 cents each, six small bolts an eighth of an inch in diameter and 2¼ inches long or six screws about same dimensions, and a yard of heavy copper wire to connect elements. Get six pieces of wood 2½ by ½ by ½ inches for binding and six pieces 1½ by ½ by ¼ inches for placing between carbon and zinc.

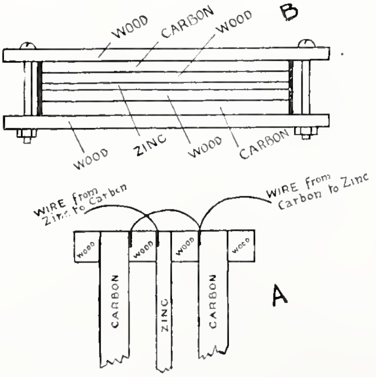


Fig I

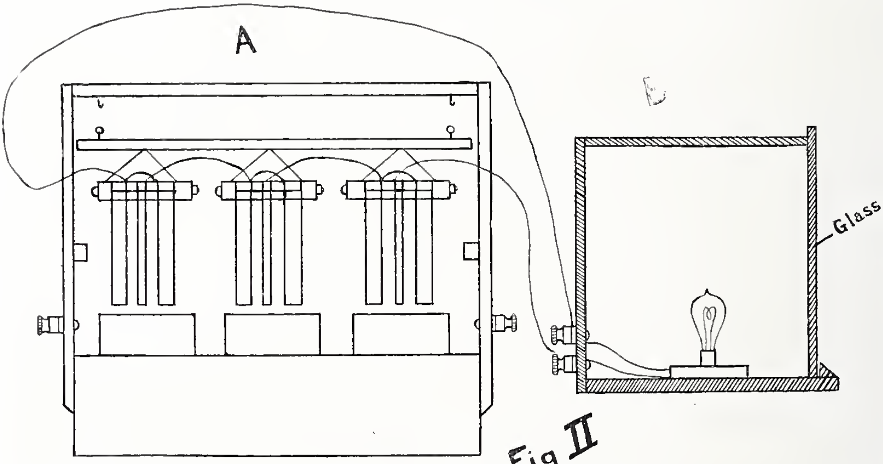


Fig II

If not already done the tops of the carbons will have to be paraffined to prevent the connections being eaten away by the chemicals. To do this melt some paraffin and immerse the carbons to a depth of one inch from the top.

Arrange two thick pieces and two thin pieces of the wood, two pieces of carbon and one of zinc, insert the wires as shown in A, Fig 1. Be sure the wires make good contact. Scrape them bright and also remove a little of the wax on carbons where wires touch. Then bolt or screw together as in B, Fig. 1. Proceed in same way for other two cells.

The easiest way to charge the batteries is to use "Federal Salt" or "Electric Sand" which cost about 20 cents per pound, and can be had at any electrical supply store with other materials. Dissolve the chemicals as directed and fill the cells about half full; then place the elements in the solution. Connect the wire from the carbon of one cell to the zinc of the next cell and so on as in A, Fig. 2. This will leave one wire at each end free, one from carbon and other from zinc.

If desired a box as shown in Fig. 2

can be constructed. This greatly facilitates the use of the batteries and saves the elements, as they must be taken out of the solution when not in use.

The lamp part is easily made, it being but a small wooden box with the ruby or orange glass placed in front of the opening in a rabbet or some other way to admit of opening if necessary. The small incandescent lamp is placed inside of the box and connected by two copper wires to the battery as shown in Fig. 2. A small battery lamp will cost, with base, about 65 cents, bringing the cost of entire plant up to $1.50.

By using two or three yards of flexible cord the lamp could be placed some distance from the battery and moved about at will. This cord, double, costs about 5 cents per yard. The addition of two small binding posts on battery box and two on lamp will make connection and disconnection more simple. These cost 4 cents each. I have used a lamp of this kind for ten consecutive hours on one charge at an outlay of 8 cents.

The electric lamp in a small darkroom is far ahead of an oil lamp. The cost is a little greater, but the advantage, especially in warm weather, more than offsets this. A larger battery will last longer on a single charge but does not give any more current. The new chemical compounds for charging them are cheaper than the old troublesome fluids and make a small battery more convenient than a large one.

C. J. Korndorfer.

Negative by S. L. Gates, Chicago.

GOING TO SCHOOL.
(Third Prize.)

KROMSKOP COLOR PHOTOGRAPHY.

The idea of trichromatic photography dates back to 1861, when Prof. James Clark-Maxwell suggested that by making three photographs through three-color screens to represent the three fundamental color sensations, and then projecting them by a triple lantern through the same color screens, a composite image might be obtained which should reproduce the colors of objects to the eye. Du Hauron and others afterward worked upon and extended this idea, but up to 1888 only crude and imperfect results were obtained, and at that time the idea had been so discredited by failures that the announcement that Mr. Frederic Ives had succeeded in obtaining really perfect trichromatic projections attracted a great deal of attention and gave rise to many expressions of incredulity. Since that time, Mr. Ives' demonstrations have been repeated in the principal Eastern cities and in England, France, Germany and Austria, and in recognition of his success honorary medals have been awarded by several scientific societies. But the production of three photographic negatives and positives and their projection by a triple lantern was very far from filling the requirements for a process of color photography, however, perfect the results, and Mr. Ives has since been working industriously to carry out the idea in a simpler and more readily available way.

The result of twelve years' work, marked by the issue of about as many patents, in the "Kromskop" system, by which photography in colors is achieved with a camera as simple in operation as any other, and a viewing device which is used like a stereoscope, and is therefore available everywhere and at all times.

By such simple means, images are obtained which are entirely without "structure," and so faithful and realistic as to have commanded the enthusiastic admiration of the most skeptical. In fact, it is claimed for the Kromskop image that it has set the standard for all time as to quality of results, being actually better than anything could possibly be upon paper, because always seen without surface reflections or distracting surroundings, and so clearly as to appear like a reflection of the objects themselves in a mirror. The Kromskop color record also has the peculiar merit of being permanent and unchangeable, which is not the case with trichromatic color prints of any kind.

The manufacture of Kromskops and Kromograms has recently been established in this country, and outfits are being supplied for drawing-room entertainment and for use in schools and colleges. Cameras are also being supplied, with which amateurs can make their own pictures, and we shall no doubt soon hear a great deal more of this system of color photography.

HOW TO UTILIZE PHOTOGRAPHY AS A HOBBY DURING THE WINTER.

THIRD-PRIZE ARTICLE.

When summer has gone and landscapes are almost out of the question and outdoor photography ceases to be a comfortable pleasure, one must turn his thoughts to something else in the photography line that he can do indoors. I know of nothing that does this so well as flash-lights. A great many amateurs have tried this with poor success. Yet, there is nothing easier or more sure of success than flash-lights.

A great many can not find subjects for more than two or three pictures. They photograph a room or try for an interior, then they are done. I have a little girl four years old, a baby six months old, a cat and a kitten. Yet, with the combinations I can make with these and the different poses I can get, I figure three exposures a week on an average for the winter. If I run short I will borrow my neighbor's cat and dog and arrange a new set of combinations.

I have about twenty-five feet of ¼-inch rubber tubing, which I attach to my flash-lamp. I then sit down in the room with the rest or take my place among them, and when all is ready I step on the bulb and thus give the flash.

I can copy pictures by flash-light better than by daylight. For portraits it is to be preferred by far to daylight. Select the part of the room you wish to show the plainest, place a candle or lamp at that place, and focus on the flame. If copying, place the flame exactly where the center of the picture to be copied will be. For portraits, place the candle flame on a line with the face and just to one side and focus on it. Do not have the person too near the background or a deep shadow will be cast on it. A black background is best, as it absorbs the shadows.

A compound flash powder is best, as it is quicker than pure magnesium and the sitter does not have time to move during the flash. Always remember never to to uncap the lens, even if you do have to wait a few seconds or even moments for things to get just as you want them, for a few moments will do no harm as long as no light shines directly into your camera.

For those who do not possess a lamp, there are cartridges for sale at all dealers, with a fuse attached, which are very handy. Or you can take a piece of paper, say a foot square; lay about a thimbleful of powder in the center—about twenty grains will be sufficient for a subject not over ten feet distant. Place the paper in an old tin pan or dust pan, light one corner of the paper, hold away from the face and wait till the paper burns to the powder, when it will ignite.

Negative by F. Dundas Todd.

Though free from business cares and toil,
He haunts the old desk still;
And visions of the bygone days,
Go trooping past at will.

put a compound powder in a storage lamp. Hold the lamp a little above the camera, a little to one side and back of the camera. Have all the light in the room you can get from lamps or gas. Be careful they do not shine into the lens, which you can tell by looking on the ground glass. The gas or lamplight should be on the opposite side of the camera from the one you ignite your flash.

Open your shutter or remove the cap from the lens after drawing the slide from the plateholder. When all is ready, give the flash. Do not be afraid

Use a large stop and the fastest plate—an iso or orthochromatic instantaneous is best.

Develop the same as you would any instantaneous exposure.

W. Marshall.

COLOR.

(Extract from a paper read before the Camera Club, London.)

In order to learn the art of coloring, we must have a kind of grammar of color, we must look upon it as a sort of language, with its *Letters*, its *Words*, its *Sentences*, and its *Song*.

It is, of course, quite out of the question to go through that grammar in a brief lecture, it is a study of months, perhaps years, so now I will only explain what I mean by the *Letters*, the *Words*, and the *Sentence*, or chord, and will end my talk by explaining the *Song of Color*.

Nor would it be of so much interest to you as to painters.

This is my difficulty, and I am wondering what use my observations can be to the photographer. Can he give some indication of the delicacy and variety of color with his camera ? Is it something worth trying for ? I think so. I have seen some photos so luminous that they suggested color to me. The only way out of my difficulty, gentlemen, is to talk to you as if you were all painters.

THE LETTERS.

The letters consist of those simple tints, such as red, yellow and blue, with which we make other tints, and when two or more of these are mixed in various proportions, they make a *word* — that is, a tint that is removed from the pure color of the spectrum. The more it is removed, graduated, broken, and lost in mystery, the more lovely it appears to the artistic eye. If we painted with the rainbow colors pure and simple (I don't mean the hundreds of gradations between them) our pictures would be crude, violent and unbearable.

But our words of color are those delicate tints of Nature, delicate but brilliant, with which she paints her jewels and her pearls, her skies, her birds, her insects, her fishes, and all the rest of her marvelous productions, and from whose ample store the colorist must collect his materials and make his dictionary.

CHINESE FAN.

These words can be studied in art as well as nature ; in a Chinese fan, for instance, with its pretty little figures, with real China faces and real silk dresses, wonderfully ornamented with patterns, or in a Persian rug with all its quaint fancies, in Satsuma ware and a hundred other wares, as well as in the pictures of the "Great Masters." (Here is the Chinese fan I spoke of, almost worn out, but still a feast of color. I have written a whole chapter about it, which I will not read to you now. But to show you that good art of whatever kind knows no stint, this little plaything is painted on both sides with equal care.)

THE SENTENCE.

Having explained what I mean by the words, that of the sentence naturally follows. It is the first step in combining tints so as to produce harmony, although almost any arrangement of beautiful colors will look well, like flowers in a garden.

Still, there are certain combinations which enhance still more the pleasure we take in contemplating them.

It is one of the good laws of color that the most opposed in hues are often the best of friends, for they show up each other's goodness and beauty.

Thus you will constantly find in Nature's painting, as well as in works of art, that pale yellow and gray like to set side by side ; you will find them sometimes on a butterfly's wing, and if red coral join their company they make a very pretty trio. For red and gray are good friends, although red becomes almost too violent when opposed to deep blue or too cold a gray, but then golden yellow comes in between them, or spreads over them, destroying their violence and settling their differences.

Gold among the colors is as welcome as in real life, has many friends, and is a wonderful element in bringing them together. However, we must not have too much of it, or it ceases to be precious. I never could care much for gold backgrounds in pictures.

But as with riches so with our golden tints ; we must know how to make good use of them, and how to distribute them to those who are most in need.

Black, that somber and sad one, is the very best setter-off of gold, as gold is the best setter-off of black, for in color, as in charity, the benefit is twofold (see man in black by Velasquez).

Note also that gold is only becoming to the strong and rich colors, and to black and white, but it is of no use to those miserable tints of the mud and putty school. Nothing can redeem their poverty, no gold or silver or red or blue or any other smartening up will ever make them fit company for your pure, good, happy colors.

I say happy colors. I hope you will forgive the expression, but they seem so to me when they are well ordered and governed, and as if they were all living together in a beautiful garden, trying to make each other look more lovely with all their kindly code of *laws dictated by true love*. But if this is too fanciful for you, please remember that

> " Poets and painters our indulgence claim,
> Their daring equal and their art the same."

Take green, for instance, and note what a kindly color she is; she never assumes to be a foremost figure, she

Negative by Gustave Moeller, Milwaukee, Wis.

A WINTER EVENING.

seems quite unconscious that she is one of the *primary tints*, for her great desire is simply to set others off. She is a sort of Cinderella among the colors; she will dress up her fine sisters and then sit quietly back that they may look more splendid.

Is it not so with the flower and the leaf, and what flower is there that would choose any but a green leaf to set her off? What says your primrose, or any rose? What says your white daisy in the green grass? All your flowers, be they ever so dainty, or ever so gaudy, all are made more of by their green leaves.

The sentence then is a combination of beautiful words of color, or, more properly speaking, is a perfect cord which may be modified, or heightened, and be in the major or minor key.

It must be evident that to work out these various chords takes much time and quiet study, which those who love color will pursue for themselves with their own eyes and hands.

Now how is the photographer to do this? Does he think it worth doing? I think it is. He might study the color of his picture on the ground glass on which he takes his focus; he might forget about the focus and the sharpness or the blurredness of his outline, and note the color either with his paint box in hand, or lacking this, he might write down as near as possible a description of it. Anyhow, such a practice would draw his attention to color, and then he would get to enjoy it, and would not be quite so much on the lookout for black and white, and those charcoal effects which, notwithstanding that they often look very like mezzotints, rather suggest that poor nature has been cremated. I prefer, as I said just now, the luminous photo, for that suggests light and color.

MECHANISM.

There is a sort of mechanism in color produced by opposing and proportioning one tint to another, which is somewhat intricate, and would take a long chapter to enter into properly, but as I do not want to say too much all at once, I will merely show you an example of how to make fine colors precious.

METZU.

In this sketch of a cavalier by Metzu, from a picture in the Louvre, we have an excellent example of how to make a color precious. Notice his red sash across his breastplate. This little patch of bright color is about the hundredth part of the sketch (which is about a quarter of the picture) and, although the red is repeated in other parts, as in the table cover, the lining of the boots, and in a pink feather of the hat, it still holds its own, because there is such a large amount of contrasting color brought to bear upon it, such as the deep blue curtain, the black reflections in the breastplate, the gray trunks, hat, etc.; and these two extremes of bright red and deep blue are harmonized by the golden tints of the sword belt, the sleeves of the coat, and the brown boots; and these colors are again enhanced by the white of the cuffs, collar, and handkerchief; and if we further take into consideration the flesh color of the face and hands, the warm, brown color of the hair, the yellowish tone of the floor, etc., and notice how exactly everything is toned and proportioned, we shall see how subtle and mysterious is the art of coloring, and I do not think you could have a more perfect example of it than this little picture.

THE SONG OF COLOR.

I have hitherto spoken chiefly of simple or local tints — varied only by gradation or ornament, but not shaded or influenced by reflection — and are such as we see in missal painting, in all old mural paintings, in stained-glass windows, in ornament, in china-painting, in the Egyptian, Indian, Japanese, Chinese, and other oriental work where no light and shade is attempted, and where pleasant color is all that is required, such as in rugs, shawls, embroideries and hangings, and in a great deal of the early Italian and other European work, such as in Fra Angelico, Benozzo Gozzoli, and others even much later. It is an artificial coloring, but very delightful and highly decorative.

But what we might call the compound color is that which is affected by light and shade, reflections and atmospheric effects — in fact, where tone and a direct imitation of Nature are aimed at.

The two styles of coloring are entirely distinct, and, therefore, should be studied separately. The first being the easier of the two, should be studied first, and in the way we have just shown.

It is a comparatively easy art, which may be the reason why it has been carried to perfection in a greater degree and quantity than the other style of coloring, which is the natural coloring. As soon as we enter upon that, we have difficulties that the artificial colorist has no notion of.

The artificial coloring appeals only to the eye, it is but an aspect of light, or thousands of different aspects of light, variously decomposed into beautiful colors.

But it is that other art of coloring which holds the mirror up to Nature, and is akin to poetry and music, in that our emotions and our sentiments can be aroused. That is to say, that those who are strongly affected by color feel joy in all the glory of a sunny day, or sad, let us rather say thoughtful, when the gray and silvery tones of evening grow on to the deep shades of night and peacefulness, and of rest. And it is this other art, or rather this completed art of coloring, that we will call the Song of Color.

The Song of Color is a complete composition from which nothing can be taken away, and to which nothing can be added without destroying its unity and its harmony. G. A. Storey, A. R. A.

Negative by Roy S. Kent, Denver, Colo.

CLEAR AND COLD.

PRACTICAL POINTERS FOR AMATEURS.

(Continued from page 100.)

No. 30.— I can not see the image on the ground glass, especially on a windy day with the focusing cloth blowing around. Put two strings formed in a loop along one edge of the cloth, loop this under the lens. You can easily hold the remainder of the cloth around your head and the ground glass even in a high wind. A hand reading-glass costing $1 will then enable you to see and focus on the ground glass detail which would be almost invisible to the naked eye.

No. 31.— I have some good negatives, but they are fogged at one end, and sometimes around the edges. What caused this? Do not draw the slide with the sun shining on that side of the camera, or the light will enter the slide aperture in a fraction of a second before the spring in the groove has closed. Cover the camera with the cloth when drawing the slide in sunlight; it is a good plan to do so at all times, and the end of the plate will not be fogged, except slightly, when the sides are also fogged by laying the holder down in the sun when getting ready. Keep them in the box or under the cloth. Kodak films fog at the slide end as described and should be covered or protected when using the slide and some makes of cameras, when turning the key.

No. 32.—What are the best colors for photographs, and how are they used? Oil-colors may be used, but require so long to dry. Rezali tints (water-colors) are fair, but the yellows are poor. I find Elmandorf's slide colors, liquid, or Columbia water-colors (moist in pans) to be the best. Glossy paper needs a size like that furnished by the makers. I make one just as good from an ounce of French gelatin soaked three hours in a pint of cold water, then three pints of boiling water added to it. When cold brush several dozen prints (mounted) over with it. You can brush a dozen in two minutes; they dry rapidly. Then follow the instructions sent with the colors. Rough developing papers need no size. Just dampen the paper and put on the colors.

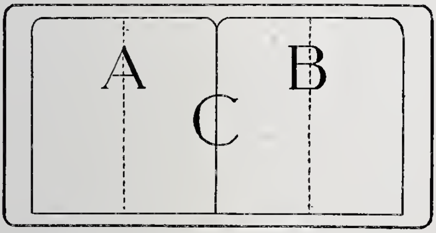
Burnishing, if needed, must be done after the coloring.

No. 33.—Describe briefly how an amateur may make lantern slides from his own plates and films? Take a 3¾ by 4 inches lantern plate—Eastman's, Carbutt's and Seed's are all about the same speed (slow)—and place the film side of it (by red light) against the film of your glass negative, or your film negative resting on a plain glass in the printing-frame. Try an exposure of half a minute one foot from a small kerosene lamp, put out the white light and develop by red light, using developer according to instructions in plate box. You will soon find the correct exposure. If you spoil the plate you can use it for a cover glass and try again. The plates being thin (in gelatin and silver) are soon fixed and washed; then you put on cover, glass, mat and binder. If your negatives are over 4 by 5 inches, you will have to be content with taking a piece out of them the size of your lantern plate, or get the whole plate by reduction. Transparencies can be made from the large negatives in the same manner, putting a ground glass behind them for window use. Frames for the latter 5½ by 8½ inches cost about 40 cents.

No. 34.—Give me a short-cut method of making a good flash-light picture at home. Use a kodak film or plate as fast as Eastman red label, Stanley lightning, Cramer brown, or Seed 27, for portrait or group in a room not over twelve feet square. Use an Eastman No. 2 Flash-light Cartridge. Place on a board about three feet to the side and one or two feet above the camera. Focus upon the flame of a lighted lamp held near the face of one of the sitters, or work by camera scale. Have one lamp or gas lighted. Lens should work from U. S. 4 for dark walls to U. S. 16 (*f* 16) for very light walls. A larger room would need another cartridge, perhaps two. If a darkroom, kodak or hand camera, largest lens opening is needed. Connect a 6 or 8-inch strip of paper to the 3-inch fuse of the cartridge. After lighting the paper you have time before flash to sit with the company and be taken with them. When focused, and cartridge is connected to paper, put in plate-holder, draw slide, tell them to be still, open the shutter, light the paper. After the flash close the shutter, then the slide, and develop at once, so in case of failure you can try again.

No. 35.—The two sides of a mounted stereoscopic view seem to be alike; if so, why use a double camera instead of pasting two similar views together? The two views are not alike, because one was taken three inches to the right or left of the other one; therefore the pictures are dissimilar because each lens of the stereo-camera (about the same distance apart of the human eye) looked as it were around the corner of each object in the scene, and obtained the effect of rotundity and relief which is shown with fine effect when seen through the stereoscope, which joins the two pictures together.

The picture A to the left is moved to the right, C to the central position, the picture B at the right on the card is moved to the left, C also in the central position; therefore neither picture is seen in its true place at the right and left, but in the new position C. Two single and similar pictures will not give this fine effect of relief. These views can be made with a single camera by taking the second view three inches to right or left of first one, but can only be done on "still" views.



No. 36.— How are stereoscopic views mounted? If cut through the center, they must be reversed when mounted. If not cut, however, the printing paper should measure double length, or 13 inches long, and 3½ to 4 inches high. Take a piece of cardboard 6½ by 4 inches, draw a vertical line 3¼ inches from each end. Crease the 13-inch strip of paper in the center — 6½ inches from the ends. Place the crease on the line of the cardboard, and wind the paper (sensitized side outward) backward round the cardboard, until the ends of the paper reach the central line. Then print the center of the paper on one side of the cardboard, reverse the cardboard and print the two ends of the paper. When printed, cut the paper at the crease and you have printed two double views. Always place bottom of card and paper along bottom of negative as a register. The views are already reversed for mounting, without cutting, the reversal having taken place in the printing.

This is the best known method without cutting the negative in two parts.

William Bullock.

AIDS FOR AMATEURS.

Happily situated is the worker who has in winter a comfortable darkroom. To those who are not so situated it is often recommended to warm trays and developer by setting them over a pan of hot water. But a better way and one not so sloppy, is to use a large soapstone foot-warmer, procurable in almost any town for a few cents. My plan of procedure is to heat the stone quite hot, then place it on the developing table, with several thicknesses of newspaper over and around the stone. The developing tray with developer poured in is set right on the papers. As soon as the temperature rises to between 65 and 70 degrees (I use a dairy thermometer and put the bulb right in the tray) the solution is poured into the graduate and everything is ready with developer and tray at a known temperature — a very important point. By setting the tray off the soapstone when the temperature rises too high, and on again when it falls too low, one can have perfect control even in a cold room in cold weather.

A NEW USE FOR SALT IN PHOTOGRAPHY.

Salt is used in various ways in photography, but I have never seen it recommended as an aid to composition. That is the way I am going to recommend it. Yes — salt as an aid to composition. Who has not tried to combine animals with a certain landscape in vain, because the animals would not remain in proper position long enough to manipulate the camera? We are not all "Jim Patricks," consequently can not hire a shepherd to go with us picture-taking. With a little bag of salt scattered over the ground, one can get and keep as long as necessary the animals in just the location wanted to complete the picture.

TO LAY OUT AN OVAL.

It sometimes comes handy to have a perfect oval for a mask in printing. An easy way to lay it out is to take a soft cotton string, say eight inches long; tie it together at the ends to make a band.

Take a piece of paper large enough for a 4 by 5 mask, lay it on a smooth board and drive two common pins through the paper into the board far enough so they will stand firmly. For this length of string set the pins about three inches apart. Lay the band of string on the paper around the pins, and with a pencil held in a vertical position, follow the string around, the pencil point stretching the string tightly against the pins and the paper. By varying the length of string and position of pins, ovals of any size and proportions may be made.

THE SQUEEGEED PRINT.

The squeegeed print and how to mount it, was pretty well ventilated last summer in The Photo-Beacon, yet there is another way that is in some respects different from anything there mentioned. After the print is on the ferrotype plate and before it is dry, paste the back with ordinary paste or Le Page's glue and put on plain mounting board. It is well to dry it under the weight of several books, to prevent the mounting board curling away from the prints. When dry and stripped, trim the print and board with a beveled edge by means of a sharp pocketknife and a ruler. The print is now ready for remounting, which is usually done by dotting the back with Le Page's glue and drying under a weight as before. By this means not only is the gloss preserved, but the picture is improved in appearance by the beveled edge. James E. Taggart.

Lewis Center, Ohio.

WHY I TITLE MY PICTURES.

Until within the last few years I almost entirely neglected to name any of my pictures, but trusted to my verbal explanations whenever I showed them to my friends. However, I at last tried labeling them with verses from the common poets, and I soon learned the value of such labeling.

Let me tell you of an incident which shows how the name of a picture may affect one's opinion of it. I was entering a photographic contest in which the number of views was limited to four. Of course I wanted to select the best four negatives I had to represent me in the exhibition. This may seem an easy matter, but to pick out four pictures from over three hundred and say "These are the best," is difficult, to say the least.

My father and I had little trouble in selecting the first three, but when we came to the fourth our troubles commenced. Out of twelve candidates I took one that I considered the nearest to being a prize-winner, but my father could see but little to recommend it. We were not getting along very well when he suddenly turned it over and read what I had written on the back — it was a verse from our "Hoosier Poet" — and as soon as my father read it he looked again at the picture and exclaimed, "Why, this is fine! Why did you not show me this before!" All that was needed to complete the picture was an appropriate title that would express the concealed sentiment, and that expression was found in the little verse. I of course put the picture in, and as a result got the first prize in the contest.

If there is any sentiment in a picture the title must express it; if there is no sentiment, then the title should be explanatory of the thing photographed. Street scenes and certain kinds of view work would hardly be improved by sentimental labeling; and, too, many fine views are spoiled by commonplace names. The secret is to have the title and the picture coincide, as it were; they should seem to have an affinity for one another, so that one could not be thought of singly. Some pictures are well named after they are taken; others are studied and thought out long before the exposure is made. I worked for three weeks trying to get a picture to illustrate those familiar lines of Riley's:

> "When the frost is on the pumpkin
> And the fodder's in the shock."

I spoiled many plates before I got one with which I was fairly satisfied, and I can not help thinking how much better it is than if I had called it "The Corn Field."

Some people will say, "What is in a name?" but such people are like the snap-shooter who presses the button, winds up the film, and has some one else "do the rest"— they never get anything that a real photographer would have in his possession.

In conclusion it may be said that the title of a photograph, be it poetry or prose, is a strong point in its judgment. Even as a foreigner is judged by the title he bears, so is a photograph or a painting or any other great work of art. True, some masterpieces are nameless, but none are so great that could not be improved by an appropriate "name plate." Ben W. Douglass.

The Tripod Trucklet advertised in this month's issue by the Chicago Camera Company should come as a boon and a blessing to the amateur photographer who does portraiture at home. Its great recommendation is its rigidity, and this is secured with astonishing lightness.

THE TOOTHPICK IN PHOTOGRAPHY.

One of the most convenient little articles to have about the retoucher's desk is the *toothpick*. In most cases it is better for spotting negatives and prints than the sable brush and is much cheaper. It has the further advantage of always being at hand or within easy reach.

For the benefit of those who may be unfamiliar with the process of spotting pictures I will append a few simple rules.

When you have a negative that shows pinholes, scratches or clear spots on its face, or a print which, after toning, has white spots caused from dust on the negative or imperfections in the paper, proceed as follows:

Take an ordinary wooden toothpick (any old sliver will do) and sharpen one end to a needle point and the other to a wedge shape. Wet your thumb-nail

Negative by Ben W. Douglass, Indianapolis, Ind.

"When the frost is on the pumpkin,
And the fodder's in the shock."

with saliva and rub on it a piece of india ink, or spotting color, till the deposit looks quite dark, when your preparation is complete.

If it be a negative you are about to treat, incline it, film side up, on your retouching desk, or set one end of the plate on the window-sill and lean the other against the glass. Dip the pointed end of your toothpick into the spotting solution on your thumb-nail and touch with it the outer margin of your negative to see if your solution is dark enough to give the required tint. If not dark enough, rub up a little more of the spotting color; if too dark, wet the toothpick in your mouth or add a little more saliva and try it again. When the right tint is reached touch lightly the center of the spot you wish to cover with the inky point of your toothpick and the thing is done. If the spot is large, however, it may be necessary to make several touches of the toothpick close together to cover its surface, or use the flat end of the pick as a brush, or, if a portion of the film is gone it is sometimes necessary to place a drop of the spotting color on the opposite side of the negative directly over the spot and let it dry on. After the spotting has had time to dry, if it appears too thin, repeat the dose; if too dense or leaves a dense ring with a clear center, moisten the wedge end of the toothpick in your mouth, bite it till it becomes fuzzy like a brush, then proceed to carefully wipe away the ring or surplus ink with it. When again dry apply more spotting color if necessary.

Proceed in the same manner to spot prints, except lay your pictures flat on the table and use some other paper to test the strength of your spotting color on.

When through with spotting, the ink may easily be washed off the thumb-nail without leaving a stain.

J. E. Johnson.

From our advertising pages it will be seen that the Columbia Dry Plate Company are offering cash prizes for pictures made on their plates. The company issue a rather readable booklet that can be had for the asking.

EDITORIAL TABLE.

Photographers will note with considerable interest in our advertising columns that H. A. Hyatt, St. Louis, is placing on the market a simple tool for trimming oval and circular prints, leaving at the same time a narrow white border of absolutely even width all round. The tool is a very simple one and inexpensive. Full directions for using it will be found in Mr. Hyatt's advertisement.

One of the daintiest little catalogues we have seen for a long time has been sent to us by Hirsch & Kaiser, San Francisco, California. It is not very big, but any one who likes to see a specimen of artistic, catchy advertising should send for a sample.

The Ray Camera Company, Rochester, New York, favors us with a copy of its latest catalogue, which is exceedingly presentable in appearance, and very interesting in its reading matter. The description of the different instruments is given in a very practical, crisp style, that will enable any one to appreciate their good points.

The Rochester Camera and Supply Company, Rochester, New York, sends a catalogue of their 1900 models. Its get-up is excellent, well illustrated with capital half-tones, and in addition by some very clever line drawings. The cameras are well illustrated and clearly described, and almost every possible conceivable taste, fancy and need have been provided for.

From Ross, Ltd., 111 New Bond street, London, England, we have received copies of their latest catalogue, the most noticeable feature of which is a list of the new Symmetric Anastigmats, which are intended to replace the Rapid Symmetrical lenses made by same firm, and to provide anastigmatic lenses at a moderate price. We had the pleasure of seeing the behavior of some of these lenses on the testing machine when in London, and they certainly showed themselves to be excellent in quality.

"The Witchery of Kodakery," is the title of the 1900 catalogue issued by the Eastman Kodak Company, Rochester, New York. It is exceedingly interesting, and will repay the hour taken in its perusal. In new improvements we notice two additional forms of the Pocket Kodak, No. 1 A and No. 3, the No. 2 Fleco, the No. 1 Panoram Kodak, and the No. 3 Cartridge Kodak. Copies can be had from The Eastman Kodak Company, by dropping a postcard asking for one.

Home Hobbies, Arts and Crafts

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CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER.

INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

PLANING.

To plane the rough board 1 by 8 by 36 inches first place the piece in the device described in the February issue of this journal under the heading of "Fowler's Table Bench." Place it flat so that one of the wide faces is on the top, which, after it is planed perfectly smooth and level, is to be marked "X," and will be called the "working face."

The board being rough from the coarse sawmarks, besides being weather-stained, must first be "roughed down" with the jack-plane, the reason for which has already been explained.

The illustration shows the table bench with the board in position. If the reader has made the clamping device to fit into holes bored in the bench direct, instead of the base-board as shown, he must stand in position in front of the bench facing the left end, keeping his right side close up to the bench and planting his feet firmly so that the force used to push the plane ahead is gained by the weight of the body being thrown upon it rather than by any overexertion of the arms. Grasp the handle of the plane with the right hand and the knob with the left. Place the plane upon the board inclined slightly to the left, so that the right-hand corner of the blade is a trifle in advance of the left-hand corner. Draw the plane back until the blade is just off the board; here it will be found that to keep the sole of the plane horizontal it will be necessary to bear down slightly on the knob. Being careful to start the shaving at the end of the board, push the plane forward, using the weight of the body as the main force, until the blade is just off the front end of the board. The beginner will here discover a tendency to allow the toe or front end of the plane to drop below the level of the board, which must be guarded against by releasing the pressure on the knob and placing it on the handle.

The first shaving should be taken from the extreme left-hand side, the second a little to the right, moving the plane about two-thirds the width of the blade, the next a little farther to the right and so on until clear across the board. The next shaving is from where the first one was—at the left-hand side. Continue until the whole face is quite smooth except for the furrows caused by the shape of the blade in the jack-plane; then test with the try-square to be sure the surface is true or level. This testing is done by inverting the square, place it across the board and also lengthwise at various parts and notice any light passing under it at the low places. Handle the try-square with the left hand. If the edge is rubbed or pressed against the wood it will mark the high places. Look along the board from end to end to see whether the surface is twisted or warped. Also pass the fingers lightly over the surface to feel its irregularities.

When perfectly flat all the tool-marks must be removed with the smoothing-plane, which is held in exactly the same manner as the jack-plane. Its blade must be set to take a very thin shaving, and it may be said that the thinner the shaving the smoother the work.

Although the planes are not held straight on the work, the direction of the stroke is straight except perhaps if a board is warped it is sometimes roughed down with the jack-plane by taking the shaving diagonally across the board, but is always smoothed with the smoothing-plane moved straight in the direction of the length. The advantage of the inclined position of the planes will at once be noticed on examining the way the shaving passes along the blade from the foremost corner to the opposite one, which is like the cut of any other knife-blade, smoother than if it is simply pushed straight ahead.

If there is any difficulty in this planing, perhaps it will be well to examine into the cause. If the cut surface is rough, then the plane is working against the grain and the board must be turned around. If smooth, it is cutting with the grain. If the shavings do not curl in coming out of the throat, examine the position of the end of the cap — perhaps it is too far from the cutting edge of the blade; it should not be more than one-sixteenth of an inch and may be much closer if the blade is set for a very thin shaving. If the throat "chokes up," that is, gets clogged up with shavings that are too thick to pass through the mouth and stick between the blade and cap, it may be that the plane is working against the grain or the cap is too near the cutting edge of the blade.

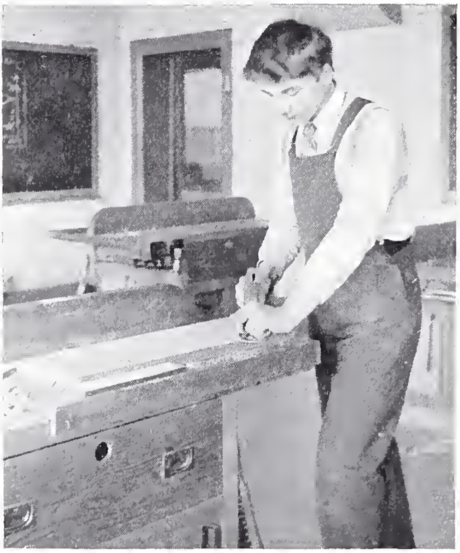


Fig. 1.

If none of these seem to remedy the difficulty, take the plane apart, loosen the two screws that secure the bedpiece to the stock, and move it back toward the handle until the blade rests on the back edge of the mouth. This will give more space for the shaving to pass through, and then put the cap about $\frac{1}{16}$-inch from the cutting edge, or if cross-grained wood is used, or it is necessary for any other reason to plane against the grain, the cap may be set very close to the edge of the blade, and the blade set very "fine" for a very thin shaving.

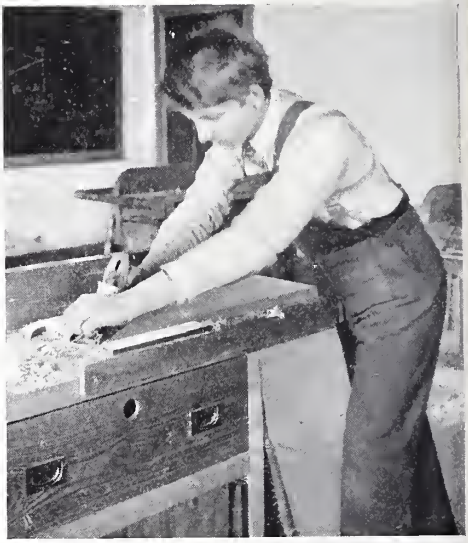


Fig. 2.

When the surface is perfectly smooth, flat and marked, plane a "Working Edge" at right angles to the working face.

If the board is thought of as having two "Faces," two "Edges," and two "Ends," it will readily be seen which surface we term as "Edge."

For the planing of the edge of a board the jack-plane is used to rough it down, and if it needs any more smoothing, a longer rather than a shorter plane should be used. For this work the plane is held a little differently than for face planing. The left hand does not grasp the knob, but instead, the thumb of the left hand rests on top of the knob and the fingers project downward below the plane and pass along, touching the face of the board. When this edge is perfectly straight and at right angles to the working face, it is called the working edge, and should be marked with an "o" or with two marks thus, "11," or in any other way.

Next square one end, that is, make the end of the board square or at right angles with both the working edge and working face. Placing the handle of the try-square on the working edge with the blade resting flat on the working face, mark with a knife a line across the working face as close to the end as possible. Put the handle of the try-square on the working face, and continue the line down the working edge and also the opposite edge, and carry the line across the other face, which is still rough — also squaring from the working edge. Put the board on the bench-hook and saw with the back-saw just outside this knife line, but letting the edge of the teeth come to the center of the line.

Test for squareness, using the square only from the working face and working edge.

If desired to plane the end, the edge opposite the working edge may be beveled to prevent it breaking off. It may then be planed in the direction from the working edge toward the back edge, which has the bevel. For this purpose use the block plane, and bear down on it slightly. Next, measure the desired length and square the other end in a similar manner.

Next, measure the width from the working edge, marking a line on the working face; it may be either a gauge line or a pencil line, but in either case parallel with the working edge. Plane the other edge to this line. Next, gauge the desired thickness from the working face, marking the gauge line on both edges and both ends. Now plane the other face to this gauge line, following the same directions given for planing the working face.

The Photo-Beacon "Exposure Tables" are guaranteed to be correct. Price, 25 cents.

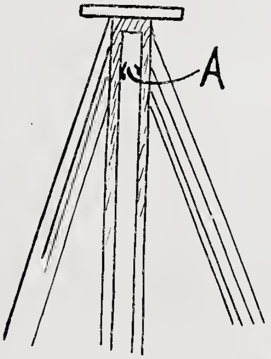
A SIMPLE DIRECT VIGNETTING DEVICE FOR THE USE OF AMATEUR PORTRAIT WORK.

The sketch below shows a simple device for attaching a direct vignetting screen to an ordinary camera tripod and may be of use to my fellow Beacon readers.

The material needed is — one piece of ½ by 1½ inches white wood, 18 inches long; one piece of ½ by ½-inch white wood, 12 inches long, and a piece of heavy cardboard 12 by 16 inches.

Take your 16-inch strip and cut a notch on either side, as shown in sketch No. 2, at point B; the width of B should correspond with width A of your tripod shown in sketch No. 1. Take a sharp penknife and cut the three holes C to about the angle shown at G; these holes should be made just large enough to allow the ½ by ½-inch strip, shown in sketch No. 3 to be pushed through tightly by hand. Saw a slit in the end of strip No. 3, as shown at D, and after cutting notches in your cardboard (E) insert same in the slot D and tack together with three tacks, as shown at F.

I



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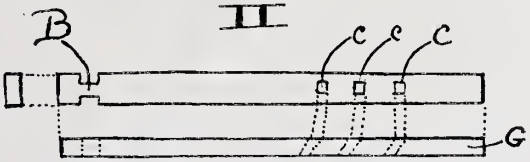
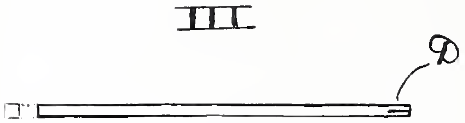
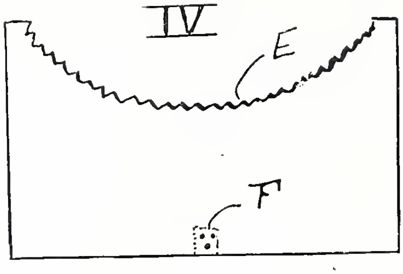


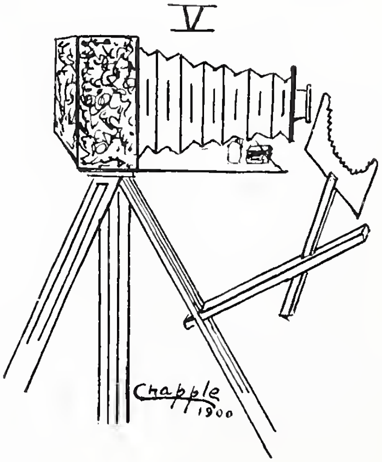
You now have as good a vignetting

screen as any professional photographer — one that has proved to be extremely practical.

Insert strip No. 2 between your tripod at A and then slide strip No. 3, with the cardboard attached, through C and it is ready for use. You will note that the leverage holds the device tightly to tripod and still allows it to be moved up or down or to be tilted to the right or left. Figure No. 5 shows the attachment in perspective.







One word of caution: Be careful in cutting notches in the cardboard that you do not make them too deep nor too pointed; but cardboard costs so little, perhaps it would be best to make several screens and then use the one that gives the best result. A small piece of cloth and some writing ink applied to the card will give the necessary somber hue to avoid reflection.

C. E. Chapple, Jr.

PREPARING FOR INVOCATION TO THE MOON.

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL.
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of The Photo-Beacon Company.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

Accepted literary articles will be paid for upon publication.

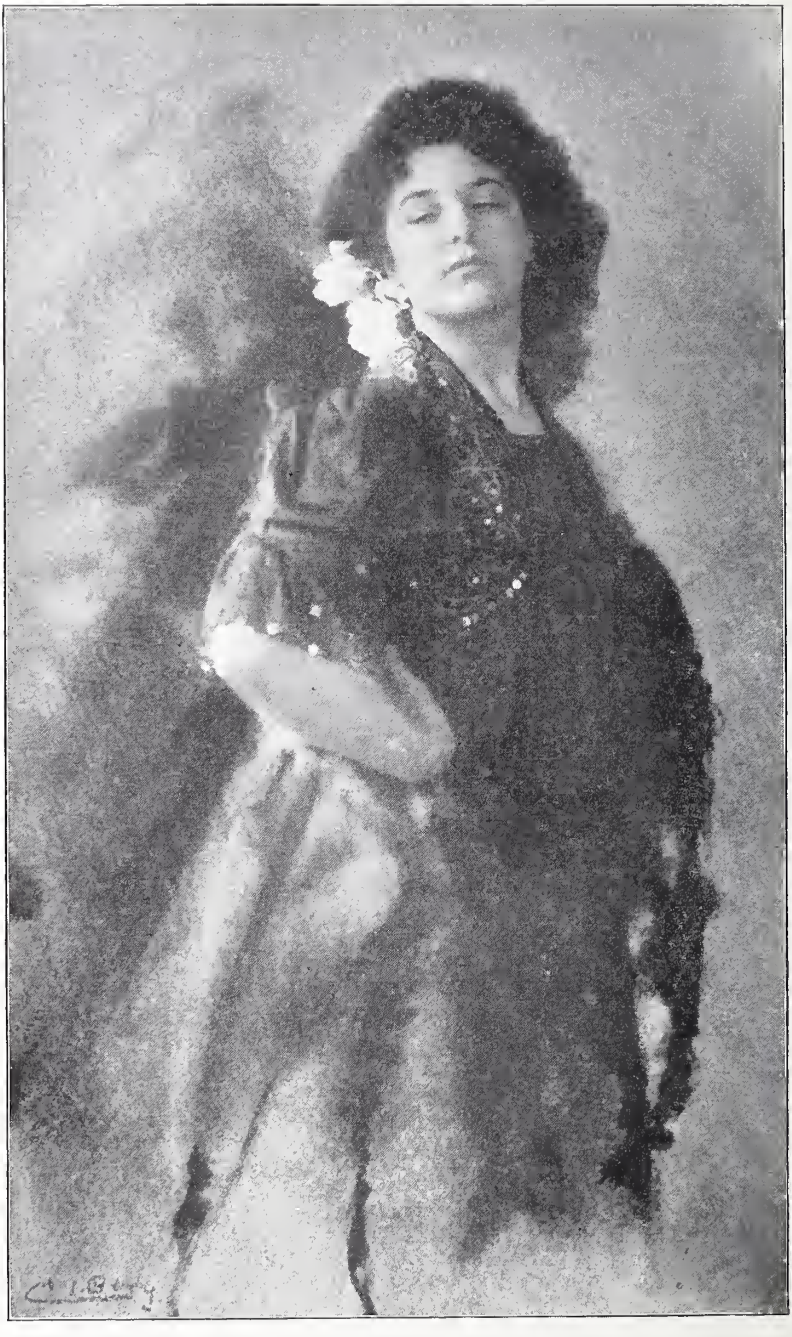
Secretaries of photographic societies are requested to favor with brief reports of their meetings.

Subscribers advertising secondhand apparatus for sale or exchange, special articles wanted, help or situations wanted, *one insertion free.*

To insure insertion in any particular number, copy for advertisements must be received not later than the 20th of the month preceding.

All communications relating to The Photo-Beacon should be addressed to

THE PHOTO-BEACON COMPANY,
TRIBUNE BUILDING,
CHICAGO, ILLINOIS.
Eastern Office: 80 Wall Street, New York.



CARMEN.

Charles I. Berg, New York.

THE
PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. JUNE, 1900. No. 6.

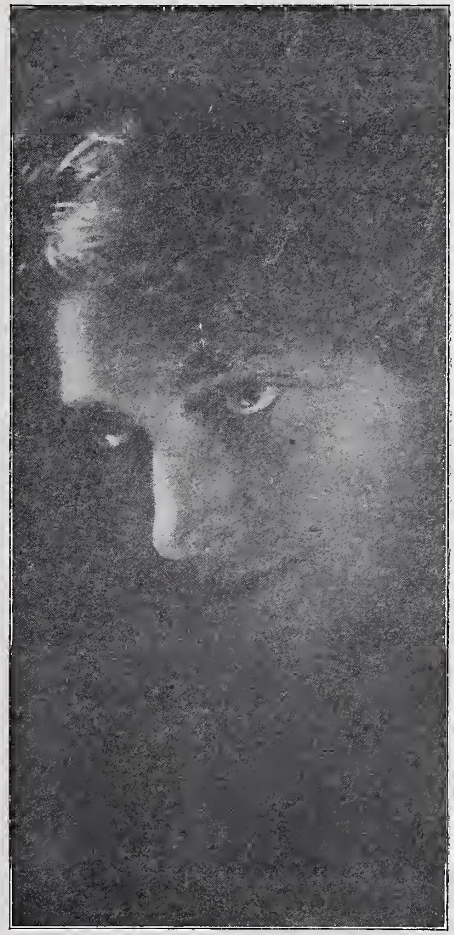
THE SALON PICTURES.

Believing that many of our readers would be desirous of possessing in portfolio proof form the various pictures reproduced in this number we have run off a few hundred sets on very heavy paper, with only one picture on each sheet, so that any one print can be taken in the hand and studied by itself. The set is gotten up in good style, in handsome cover, with a special design drawn by one of our best Western designers. The price is 50 cents for the set of proofs, and as only a few hundred have been run those who desire to possess the first issue of a collection of the best work of American photographers should order at once. Price 60 cents by mail.

THE CHICAGO SALON.

It was with no little curiosity, tinged with considerable anxiety, that I joined the crowd on the opening night at the Art Institute, for, according to the judges, in the galleries were to be found for the first time in history photographs that were really and truly artistic, photographs that had been judged purely upon their merits without the slightest consideration being given to the limitations of the medium. I had seen a few of the rejected pictures, some of which had been hung at Philadelphia, and I frankly confess they had upset my equanimity in no small degree, for I concluded that what the judges had selected would probably be of the same character, only more so.

When, therefore, I got inside the galleries I made a hurried scamper round the exhibits to get a general impression of the collection, and at the end of the run I gave a great sigh of relief, for all in all I had no special fault to find with the judgment of the jury of selection. I found many beautiful specimens of photography that were at the same time pictures in the highest sense of the term,



A FRAGMENT.

William B. Dyer, Chicago.

though I also found much that I really can not see any merit in, excepting they be classified as freaks or tricks.

It is an open secret that the judges worked with astonishing unanimity. Voting was made by ballot, and in ninety per cent of the cases the decision was unanimous. This is a fact that must be kept in mind by every one in criticising the decision of the jury in any particular case, but of course it does not prevent any other individual expressing his opinion of such work as he happens to find on the walls. The off-hand opinion of the man on the street is occasionally of more practical value than that of the expert who gets so wrapped up in a special line of study that his little world entirely shuts out the great big globe on which we live and move and have our being.

As a man in the street, then, let me give my opinion of the pictures, letting it be accepted for what it is worth, nothing more.

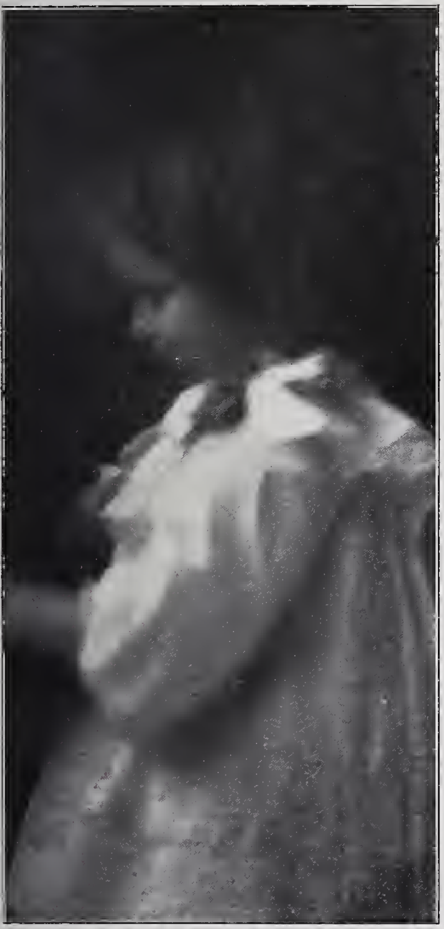
Well, first I find there are two classes of would-be photographic artists, composed of those who put their brains and feeling into the negative and those who put them into the print. The first class follow straight photography, the second wield mops and pails. The one sees the end from the beginning and carries himself as a man; the other sees a few inches beyond the point of his nose, and tinkers himself out, covering his pigmyism by shouting that his products are the only art. To my mind they are but photographic mules, neither horse nor donkey, with no pride of ancestry or hope of posterity, not even possessing the saving merit of being useful. Of course, they claim to be ornamental, but all the laws of nature shout the impossibility of such a thing. I have no hesitation in saying that the truly pictorial work shown in this exhibition are photographs and look like photographs.

ILLUSTRATION FOR "TRELAWNEY."

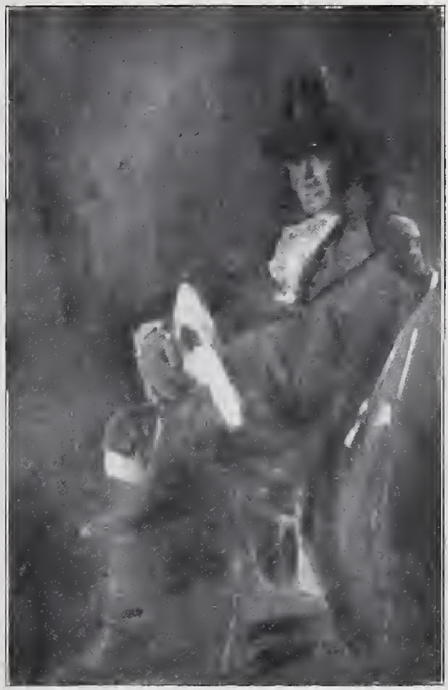
C. Yarnall Abbott, Philadelphia.

And now to the exhibits in detail. Ladies first, as a matter of courtesy, but especially as photographers and artists, for to my mind they easily carry off the laurels in the salon, both in quantity and quality. To my mind there is nothing finer in the galleries than the portrait of Mrs. S. by Miss Clark and Miss Wade, which runs the whole gamut of tonal values from pure white to black with consequential luminosity that one so rarely sees in photographic pictures. The pose is graceful and undoubtedly characteristic, so here we have the happy combination of a portrait that is deliverable to the customer and at the same time pleasing to the cultured mind, for we had the pleasure of hearing three artists expressing a high opinion of it. The balance of their work was pitched in the same high standard.

Mrs. Kaesebier, New York, is well represented in portrait work of a very pleasing character, all fine photographically, interesting in themselves, and not depending upon tricks for attraction. A group of a mother and two children was to me especially attractive.



ELIZABETH.
Virginia G. Sharp, Philadelphia.



CITIZEN FUCHE.
Joseph T. Keiley, New York.

Miss V. M. Prall, Washington, D. C., has only one frame on the walls, but it is a charming composition, a perfect study in lines and masses of light and shade, all got by pure photography.

Miss Virginia Sharp, Philadelphia, exhibits a few "invisible" portraits. Not having seen enough of them I am unable to say much about them.

Miss Ema Spencer, of Newark, Ohio, in two of her pictures, "The Student" and "Child with Apple," shows good art and excellent photography, but in "Melody" has one of the most controversial exhibits on the walls. It is a photograph of a couple of children taken against the light, and consequently is badly fogged. Here is the point round which the battle rages: if the fog was accidental the picture is not artistic; but if the fog was got deliberately then it is. Ye gods! this is high art with a vengeance, and reminds us of the old-time discussion of the scholars: How many angels can dance on the point of a needle?

Alongside of this latter hangs another, by Miss Dasie Cherry of the same city, entitled, "Portrait of Miss C." It is evident that Miss C. shook her head and glanced sideways a few times during the exposure, and the result is a high-art portrait. It certainly takes a high artist to see the least grain of merit in it.

The work of Miss Van Buren, Detroit, is very uneven. In portraiture she is good, but in other fields to me her pictures are uninteresting.

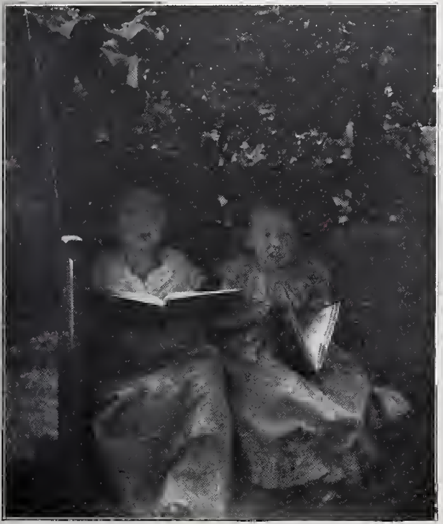
Miss Eva Walborn, of Akron, Ohio, has a pleasing portrait of a child and a fairly successful autumn scene.

MORNING.

L. L. Peddinghaus, Marietta, Ohio.

Miss Mathilde Weil, Philadelphia, in portraiture is good, and in other subjects is good photographically, and humanly interesting.

Mrs. Beman, Chicago, in "Study" shows a dainty study in gray. There the interest begins — and ends.

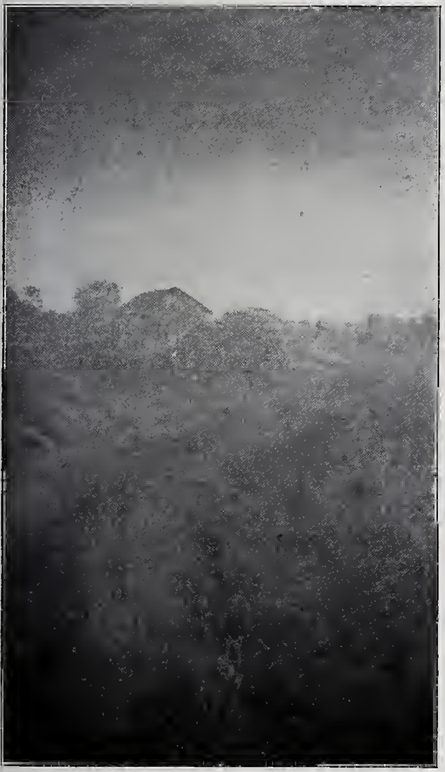


MELODY.

Ema Spencer, Newark, Ohio.

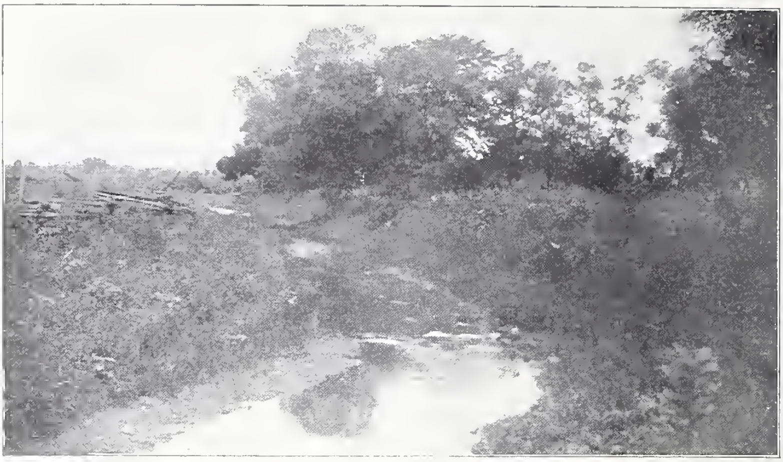
TREE STUDY.

John G. Bullock, Philadelphia.



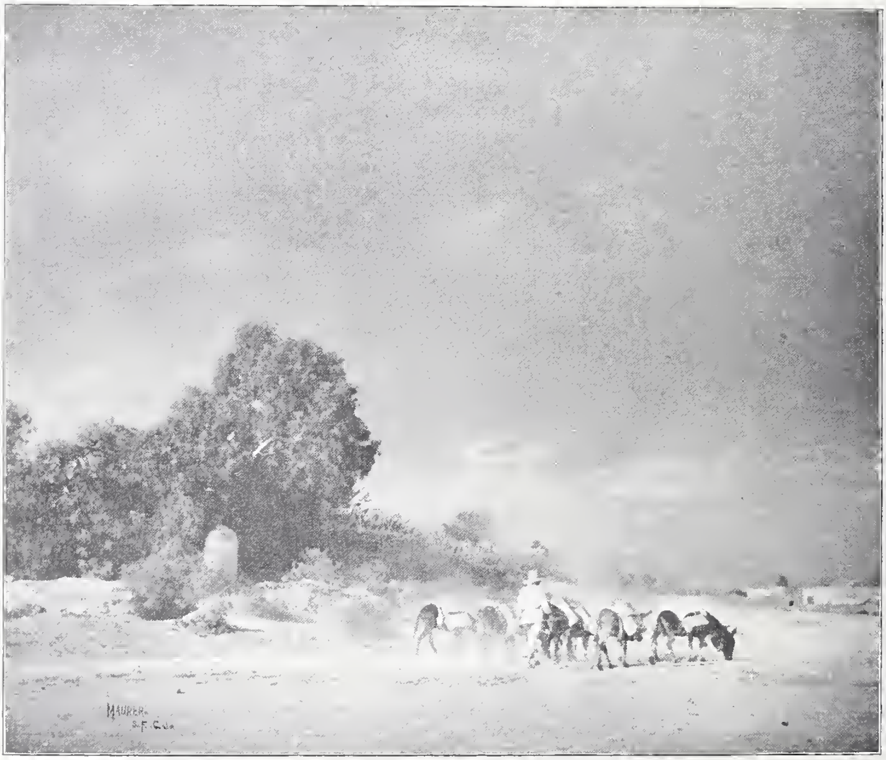
MOORLAND LIGHTS.

F. N. Waterman, New York.



A GRAY DAY.

Louis A. Lamb, Chicago.



THE STORM, NEAR MEXICO CITY.

Oscar Maurer, San Francisco.

Miss Mary R. Stanberry, Zanesville, Ohio, contents herself with ordinary subjects, but treats them in an exceedingly interesting way.

Miss Katherine Stanberry also selects an ordinary subject and produces an interesting picture.

Miss Alice Austin, of Boston, would appear to be halting between two opinions. She has four portraits on the walls, two of which are really excellent, and two of the wishy-washy type.

Miss Brownell, Chicago, in "October" selects a very ordinary subject, and is certainly ambitious in her aims, and displays much skill in manipulating gum bichromate, but while it is certainly clever it lacks a something that binds body and soul together.

Miss France B. Johnston, Washington, D. C., is represented by "The Geisha," which is a Japanese subject, and therein, to my mind, lies its only merit—it is out of the usual.

Mrs. Stirling, Philadelphia, shows a portrait of Mr. Stirling. It is very ordinary in pose and composition, and I presume its principal merit lies in its invisibility.

SALT MARSH IN WINTER.

T. O. Sloane, Jr., Orange, N. J.

SAFE HOME.

William L. Page, Chicago.

As one of the jury of selection, Miss Eva Lawrence Watson, Philadelphia, is represented by ten pieces. To me her work is very pleasing and full of artistic taste where she relies on straight photography, but in the few of her pictures where decorative effect is the aim, it is commonplace if not ridiculous.

Among the gentlemen we find a few very strong workers. John G. Bullock, Philadelphia, has two prints that I admire exceedingly on account of their vigor and breadth.

W. E. Carlin, New York, shows an excellent portrait and a charming soft evening effect.

Sunlight that looks the real thing, that's what A. D. Chaffee, of New York, has got in "Scarce Broken Paths," and he is the only one in the whole exhibition that has got it, although many have tried. The rest of his work is very good.

Dallett Fugnet, New York, in two of his pictures gets soft, dainty effects that are very pleasing. In "The Path" he is Japanese, and I suppose that is why the photograph got hung.

Arthur A. Gleason, Everett, Massachusetts, is represented by three pictures, all of them very good, "A Stormy Night in Town," being specially fine.

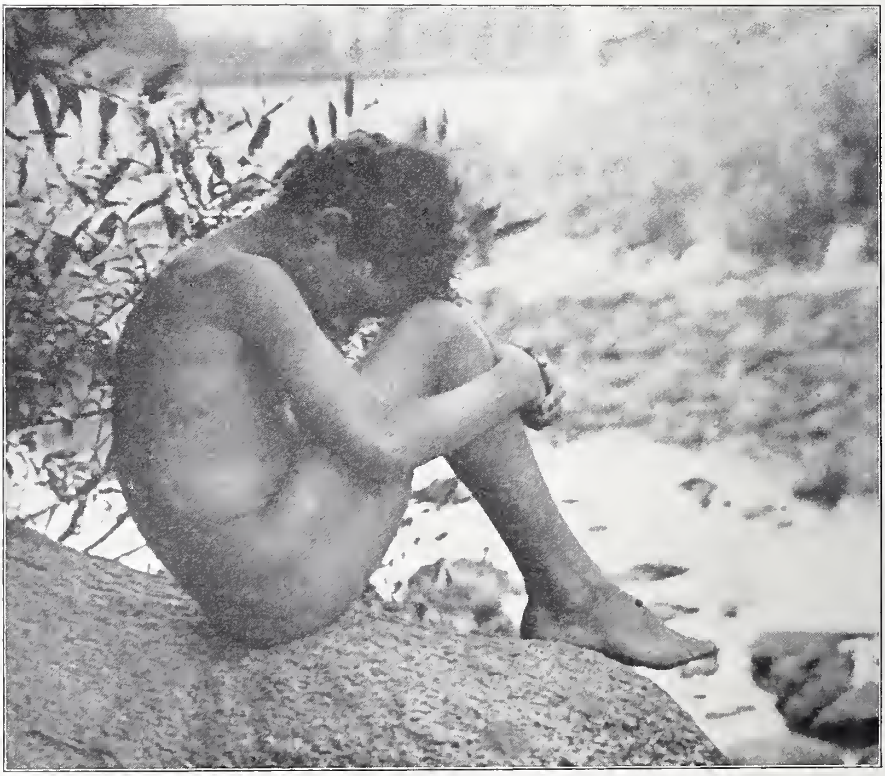
George F. Kunz, Akron, Ohio, shows two pictures, both very pleasing.

H. W. Minns, Akron, Ohio, has a couple of first-rate landscapes and an excellent portrait.

"In the Lutschenthal," by William D.

A BROOK IN SPRINGTIME.

Rob S. Redfield, Wayne, Pa.



SOLITUDE.

Herbert A. Hess, Northampton, Mass.

Murphy, New York, is a very charming landscape.

William L. Page, of Chicago, is a devotee of gum bichromate, and has four pictures that are good in spite of the medium.

L. L. Peddinghaus, Marietta, Ohio, shows true artistic feeling in handling commonplace material.

"Sunset Meadows," by Edmund Stirling, Philadelphia, is one of the most charming pictures in the salon. Five other pictures by the same gentleman are all good artistically and photographically.

C. Yarnall Abbott, Philadelphia, in "Illustrations for 'Trelawney,'" has a really clever thing, but the rest of his exhibit is to me uninteresting.

THE LOVING CUP.

F. J. Von Rapp, Philadelphia.

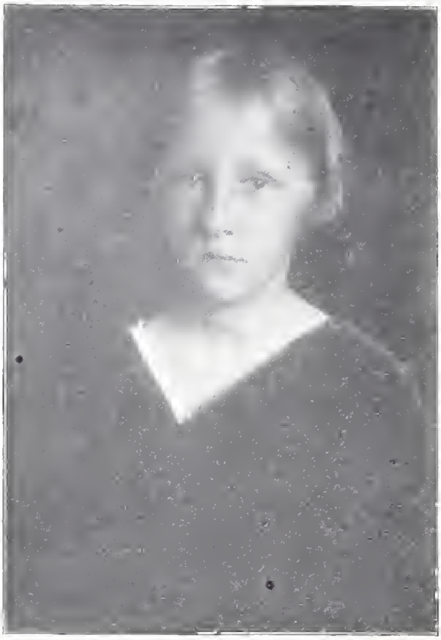
STUDY.

Mary H. Beman, Chicago.

"A Snow-storm at Dusk," by Prescott Adamson, Germantown, Pa., is a good snow picture.

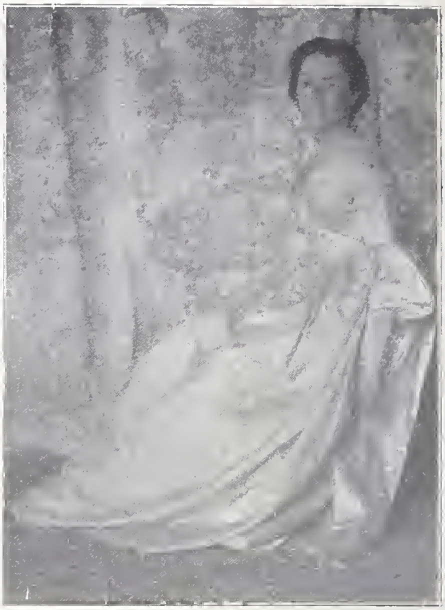
In "Carmen," Charles J. Berg, New York, has the best example of the possibilities of double toning of platinotype in the salon. His other subjects are nudes and I feel like saying hard things about them.

William B. Dyer, Chicago, is, I believe, the most enthusiastic member of the "pail and mop" brigade whose work is on the walls, and nothing but gum bichromate can satisfy his aspirations. This is a pity, for he is really a man of artistic temperament, and were he to quit chasing moonbeams and will-o'-the-wisps would assuredly score big.



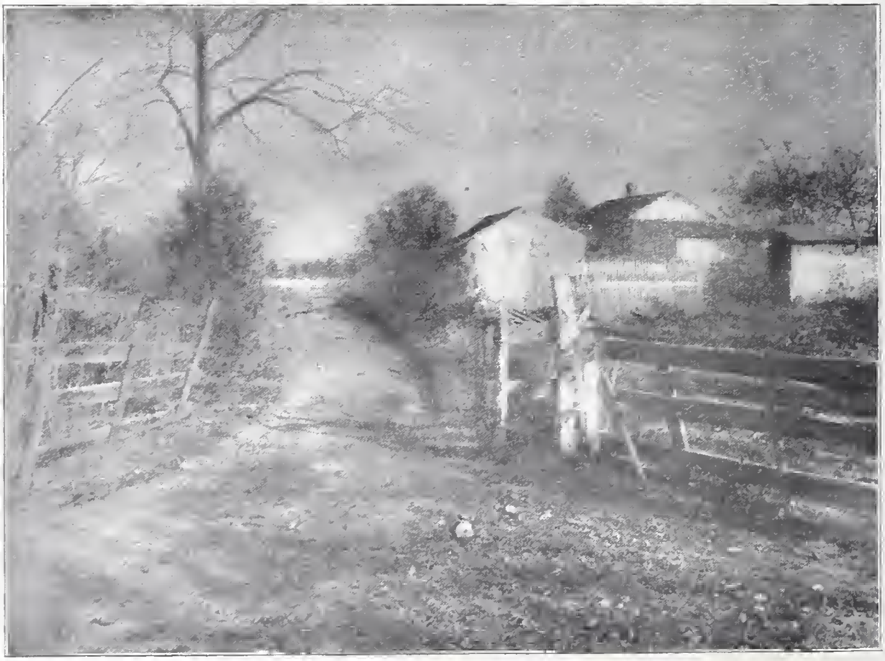
HESTER.

Rose Clark and Elizabeth Flint Wade, Buffalo.



THE OLD WEDDING DRESS.

Edmund Stirling, Philadelphia.



OCTOBER.

Elizabeth Brownell, Chicago.

PORTRAIT.

Daisie G. Cherry, Newark, Ohio.

Herbert A. Hess, Northampton, Massachusetts, is wrapped up in the nude. It would not hurt anything if his nudes were wrapped up in clothes.

"A Gray Day," by L. A. Lamb, Chicago, is very pleasing.

A fine picture that grows on one more and more, is that of Oscar Maurer, San Francisco, California, entitled "The Storm, Near Mexico City."

Messrs. Preston & Rees, East Orange, New Jersey, have a good sheep picture in the "Last Glow."

"A Brook in Springtime," by R. S. Redfield, Wayne, Pennsylvania, is a piece of capital landscape photography.

Benjamin Sharp, Philadelphia, is represented by one picture only, but it is a beauty. It is printed in gum bichromate.

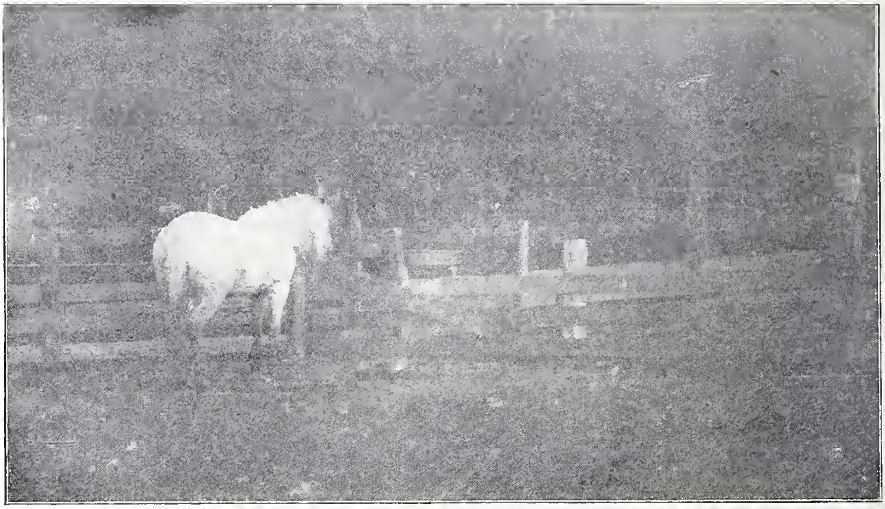
"Salt Marsh in Winter," by T. O. Sloane, Orange, New Jersey, is in the same medium, and is fair.

Edward J. Steichen, Milwaukee, Wisconsin, is a young man who has evidently caught the high-art fever, and consequently his pictures are not what they seem. In "The Frost-covered Pool" one can not discover frost or a pool, but it is evident that during exposure the camera was perched on a rickety tripod, and that a few well-placed kicks on the shins of the latter gave it wooliness enough to put the picture in the high-art class. His other subject is entitled "Keats." I never read the poems of this gentleman, and I don't want to if he produces the grewsome effect seen on this young lady's face.

In "Cloisters" Henry Troth, Philadelphia, has a hackneyed subject, but it

COKE BURNER.

John G. Bullock, Philadelphia. Pa.



A STUDY.
William B. Dyer, Chicago.

SNOW AND SKY.
Alfred Stieglitz, New York.

is excellent and it is photographically good.

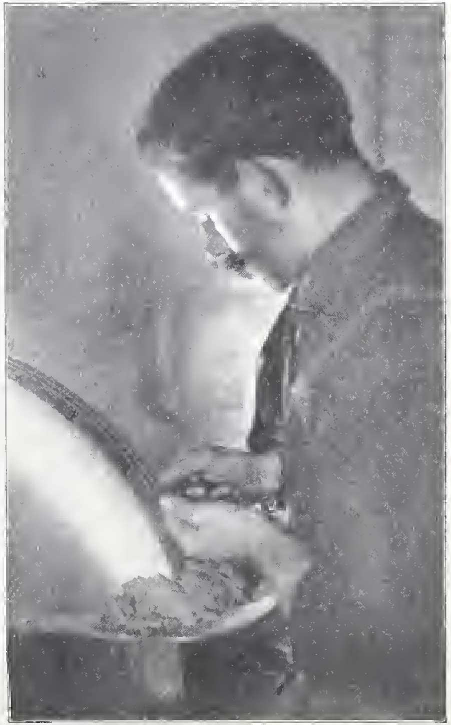
Of the work of Alfred Stieglitz I need say little, as most of what is here shown is well known. All of it is good; they are photographs and look what they pretend to be.

Mr. J. T. Keiley, Brooklyn, New York, is a maker of hybrids. He takes a piece of platinotype paper, prints on it through a negative, then by deft manipulation of solutions and a brush produces something that suggests a wash drawing. Did he know drawing — his work shows he does not — he might probably attain considerable eminence in monochrome. His efforts on the walls may be high art, which I very much doubt, but they certainly are not photography.

I must frankly confess that I have given more time and thought to the work of Clarence H. White, of Newark, Ohio, than to that of anybody else. Somehow or other my photographic soul revolted against most of it and it took me some little time to estimate his true relation to photographic art. I have sadly come to the conclusion that where he is not an imitator he is a lover of what is positively ugly. His steep, sloping floors are a trick plagiarized from Chase; his portraits of plain women are his own. No more atrocious thing was

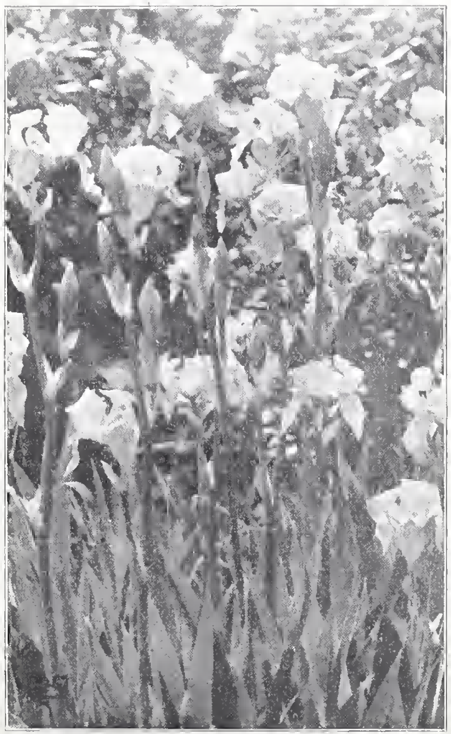
SUNSET MEADOWS.

Edmund Stirling, Philadelphia.



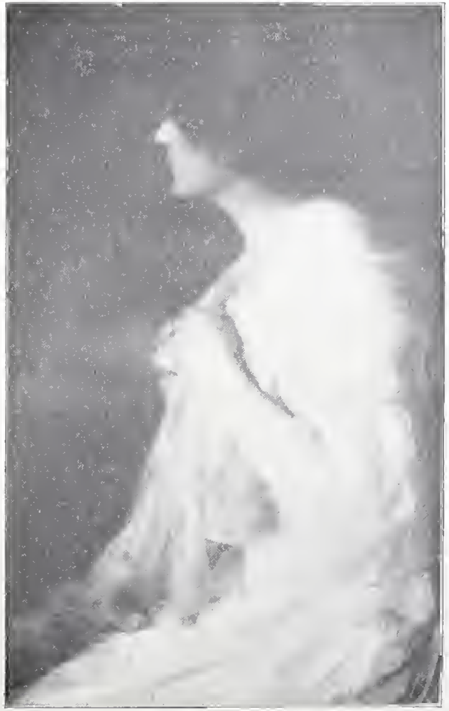
THE GRINDER.

Arthur A. Gleason, Everett, Mass.



FLEURS-DE-LIS.

Eva Lawrence Watson, Philadelphia.



PORTRAIT.

Rose Clark and Elizabeth Flint Wade, Buffalo.

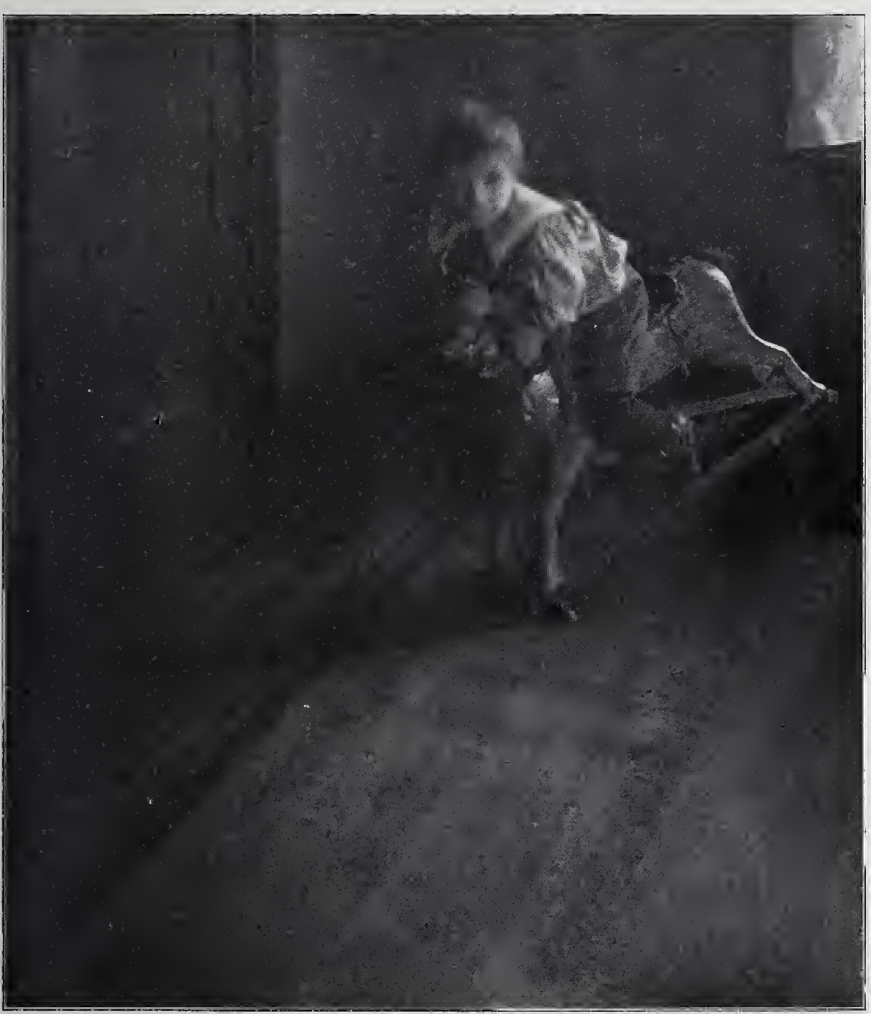
ever flung in the public face than the portrait of Miss E. F. The poor woman may have had justice done to her; if so, mercy ought to have been showered on her abundantly. She has unquestionably been libeled to pander to Mr. White's degenerate taste in art, and I emphatically protest against the taste of the photographic public being demoralized by such work being exhibited as artistic, beautiful and ennobling.

F. DUNDAS TODD.

PHILADELPHIA PHOTOGRAPHIC SALON.

The committee announces that the third salon in connection with the Photographic Society of Philadelphia will be held from October 21 to November 18, 1900. Full particulars can be had on application to the Pennsylvania Academy of the Fine Arts, Broad street, Philadelphia.

The Photo-Beacon "Exposure Tables" are guaranteed to be correct. Price, 25 cents.



THE FINISH.

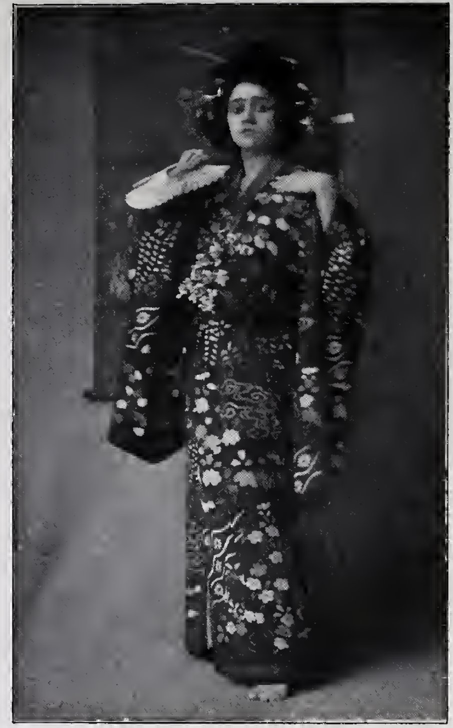
Clarence H. White, Newark, Ohio.

GOOD NIGHT.

George F. Kunz, Akron, Ohio.

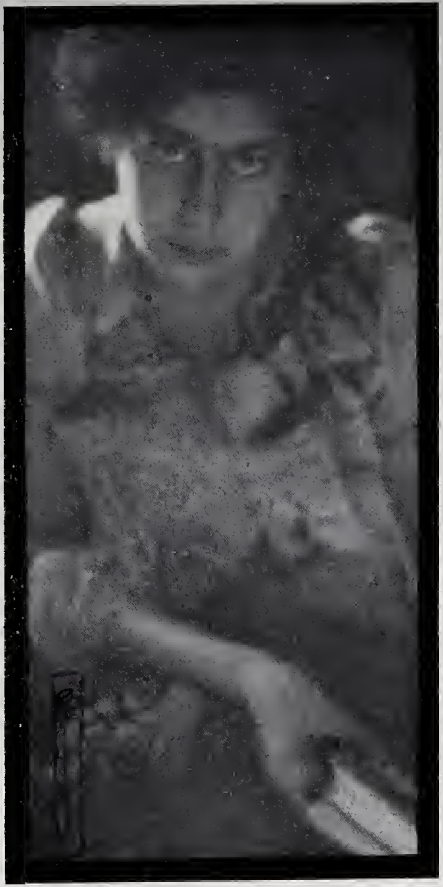
SCARCE BROKEN PATHS.

A. D. Chaffee, New York.



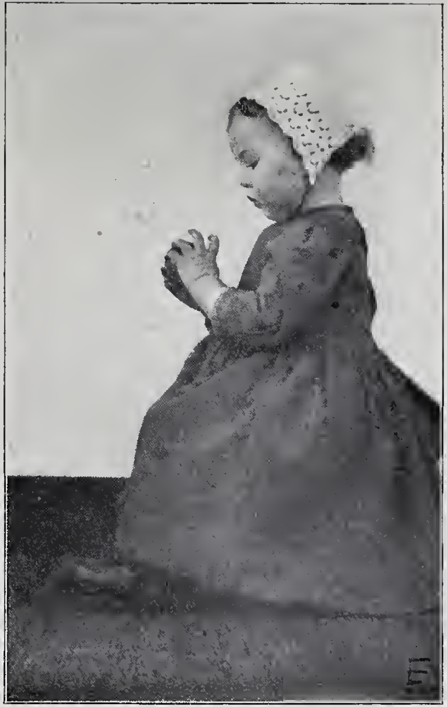
THE GEISHA.

Frances B. Johnston, Washington.



KEATS.

Eduard J. Steichen, Milwaukee



CHILD WITH APPLE.

Ema Spencer, Newark, Ohio.

CITADEL, WURZBURG, BAVARIA.

Benjamin Sharp, Philadelphia.

THE EMBROIDERY-FRAME.

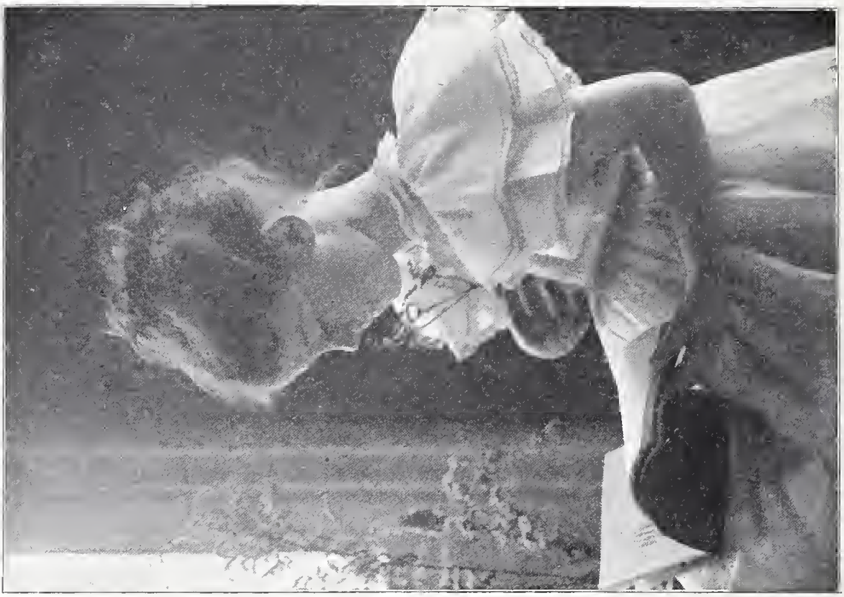
Mathilde Weil, Philadelphia.

WHERE THE SNOW LIES.

Amelia Van Buren, Detroit.

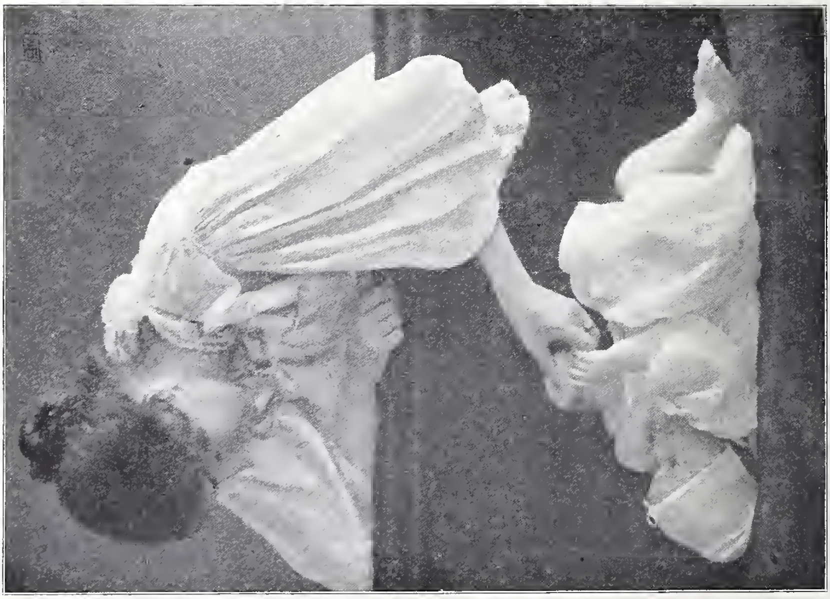
ON THE DUTCH DUNES.

W. E. Carlin, New York.



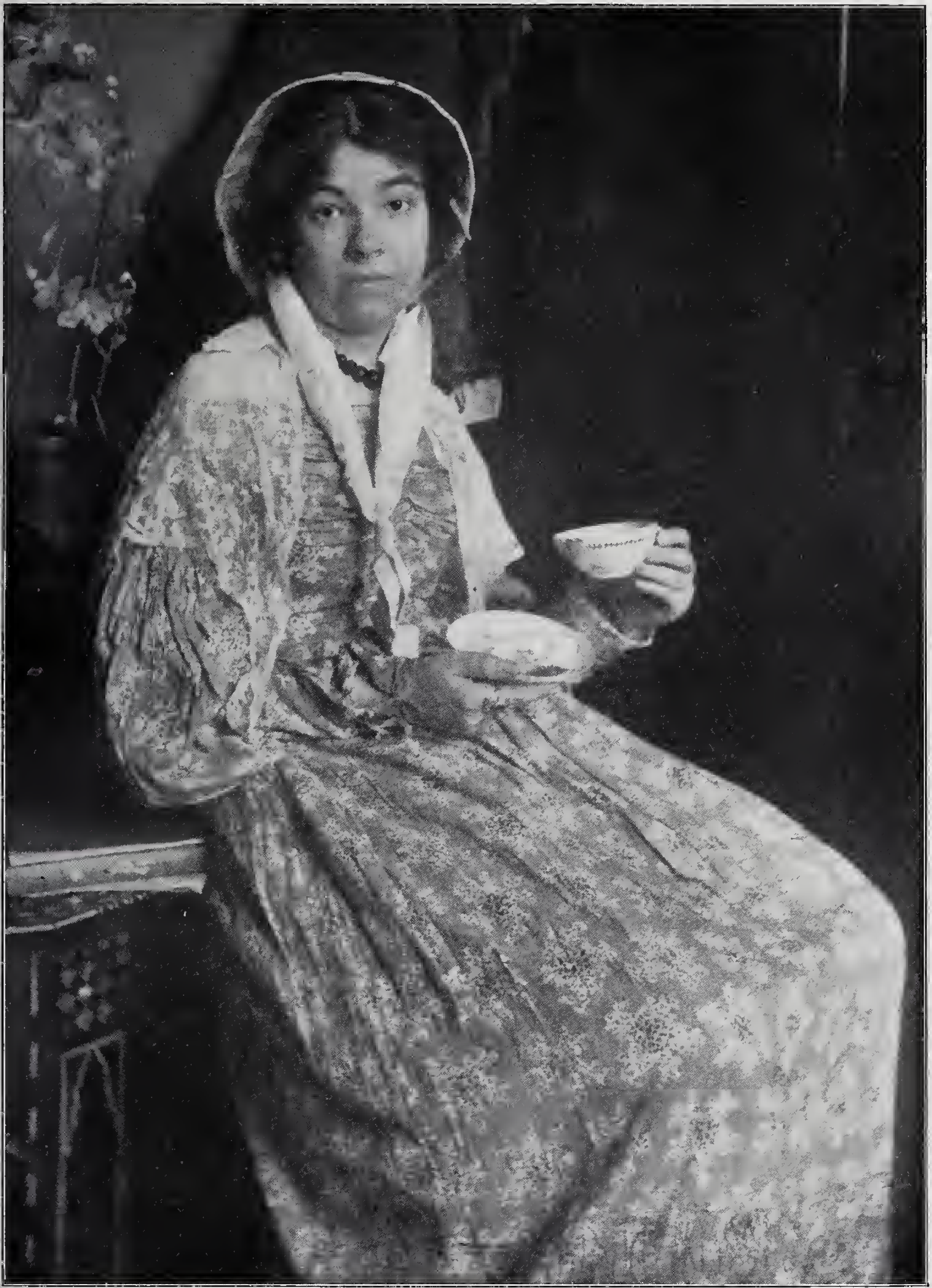
KATHARINE.

Alice Austin, Boston.



MOTHER AND CHILD.

Eva Lawrence Watson, Philadelphia.



PORTRAIT.

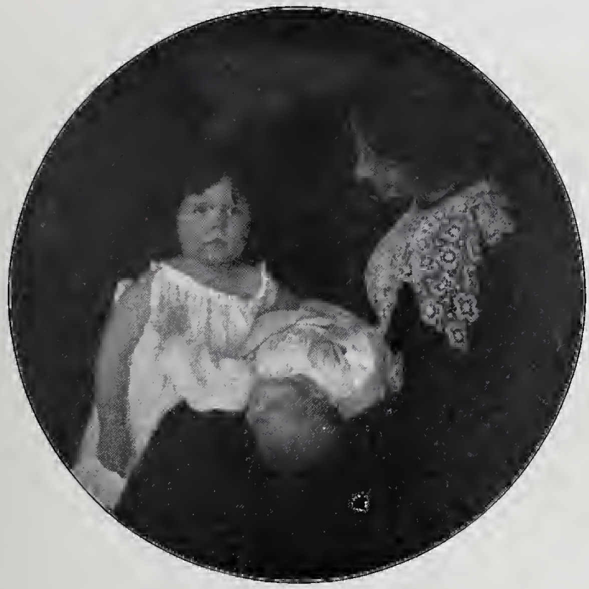
Gertrude Kaesebier, New York.

LAST GLOW.

T. J. Preston, Jr., and H. P. Rowell Rees, East Orange, N. J.

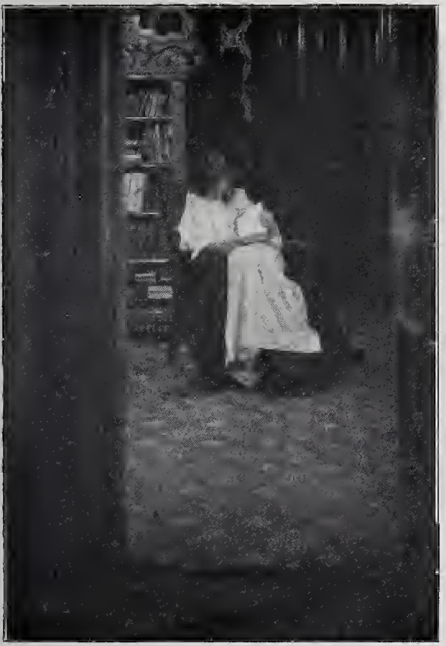
CLOISTER, SAN JUAN CAPISTRANO.

Henry Troth, Philadelphia.



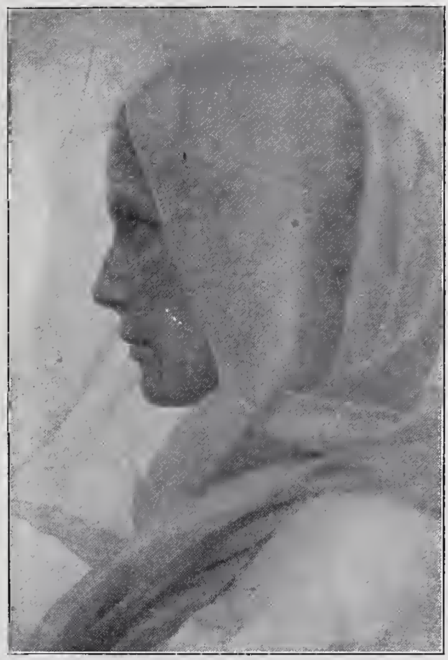
MOTHER AND CHILDREN.

Gertrude Kaesebier, New York.



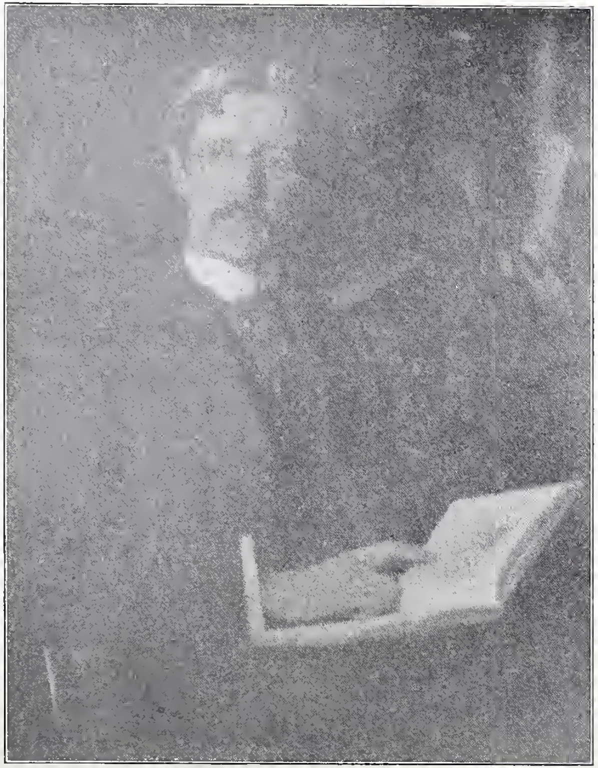
THE ARABIAN NIGHTS.

Katharine Sheward Stanbery, Zanesville, Ohio.



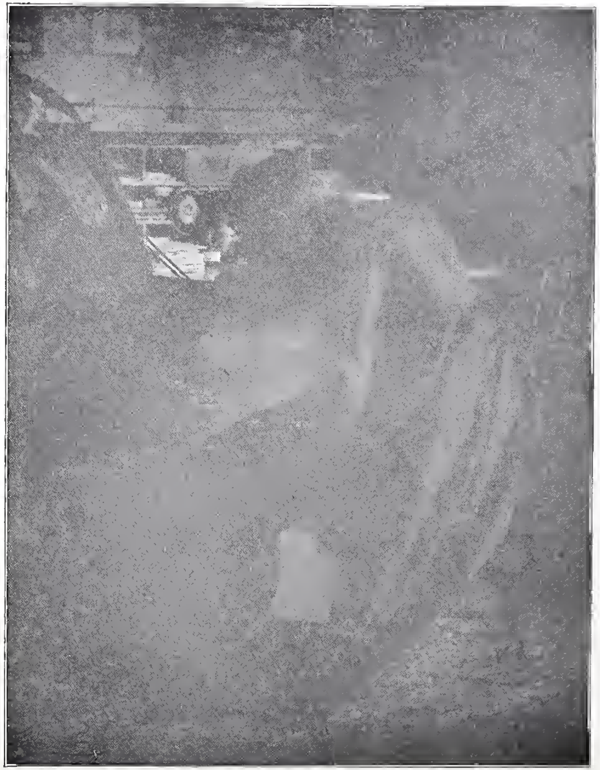
STUDY OF A HEAD.

Amelia Van Buren, Detroit.



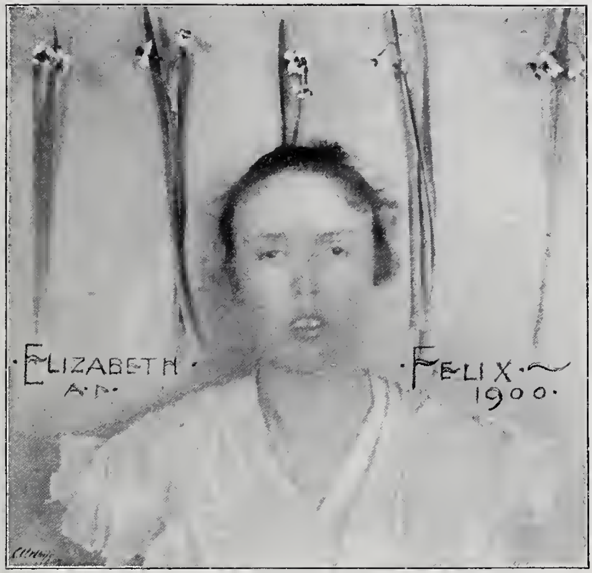
PORTRAIT OF EDMUND STIRLING.

Anna Biddle Stirling, Philadelphia.



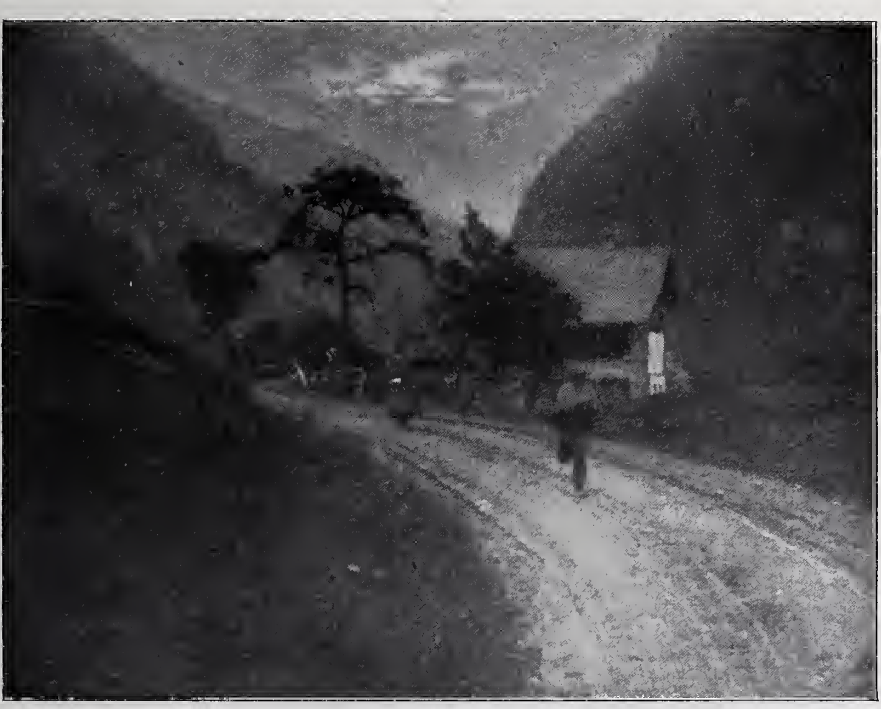
BAD NEWS.

Edmund Stirling, Philadelphia.



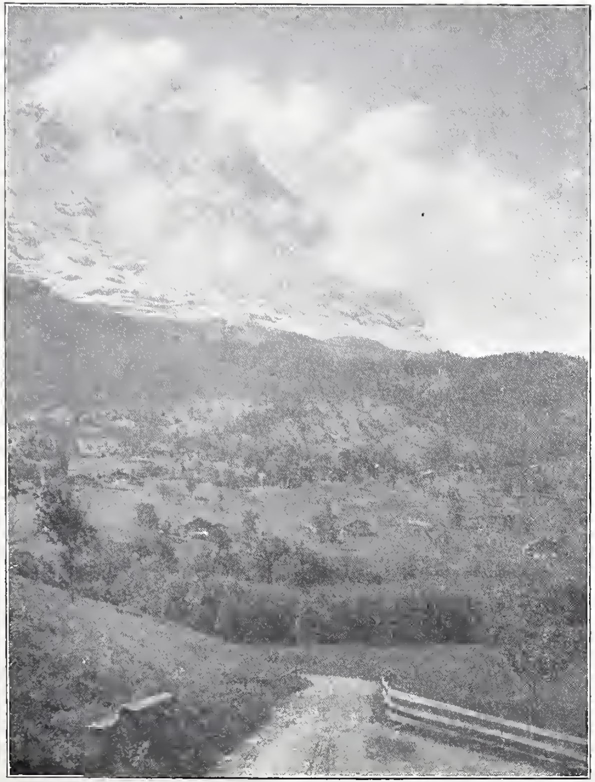
PORTRAIT.

Clarence H. White, Newark, Ohio.



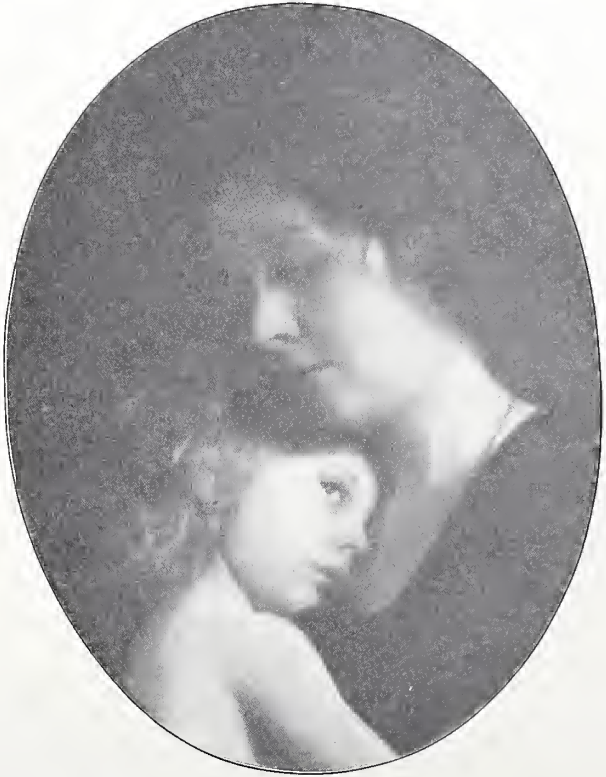
IN THE LUTSCHENTHAL.

William D. Murphy, New York.



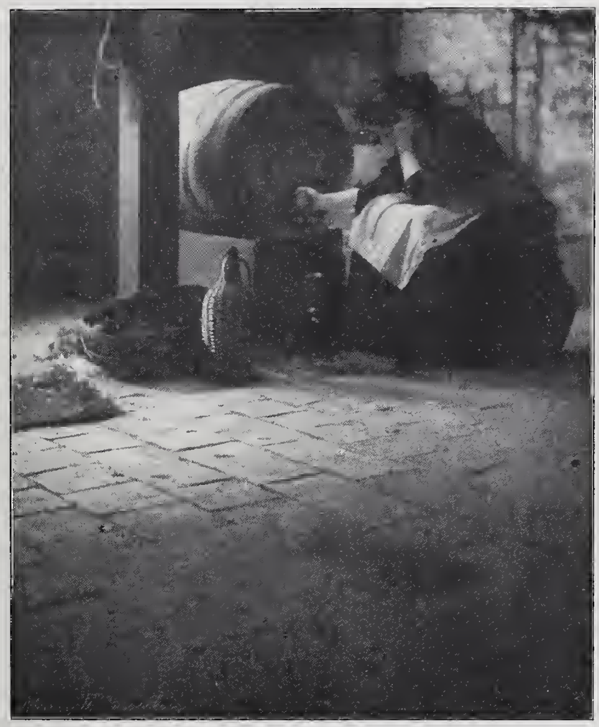
SUNSHINE AFTER RAIN.

Alfred Stieglitz, New York.



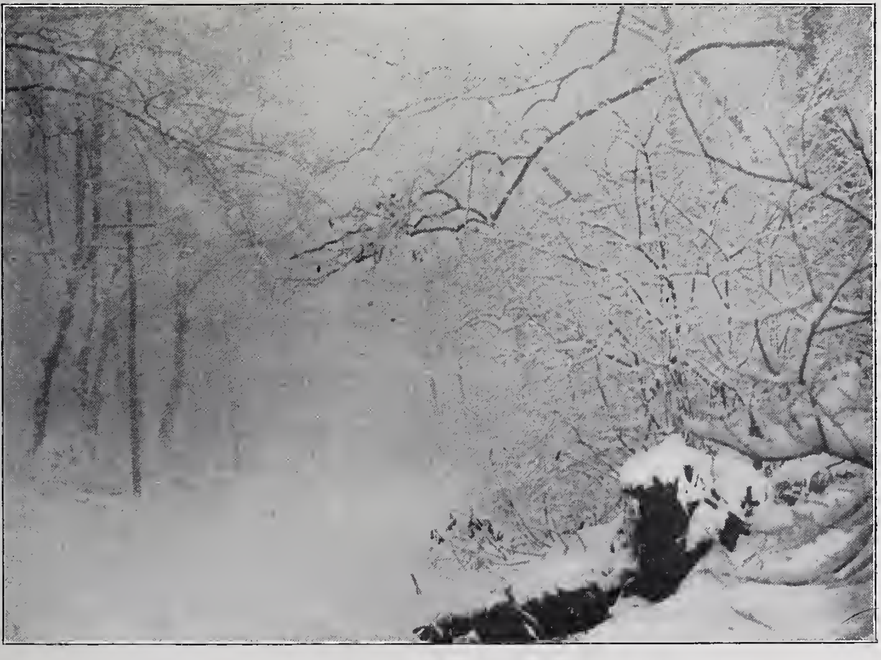
MOTHER AND CHILD.

Virginia M. Prall, Washington.



THE BAR MAID.

Mary R. Stanberry, Zanesville, Ohio.



A SNOW-STORM AT DUSK.

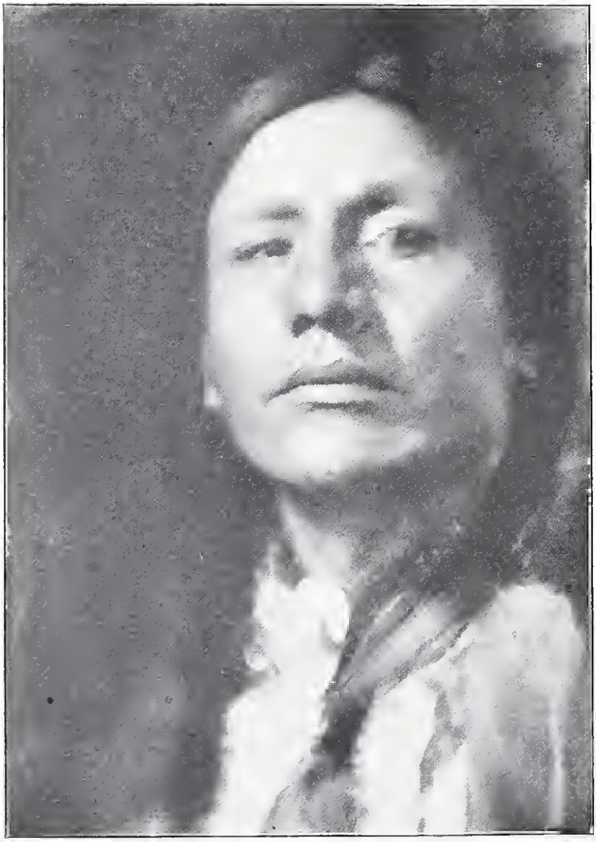
Prescott Adamson, Germantown, Pa.

THOUGHTS ON THE SALON.

Looking back over the Chicago Salon it may seem to many that amateur photographic progress was quickened in a marked degree by its influence. Before its eminent jury of selection did their work the division of the factions was much more distinct than it is now or will be in the future. After the Philadelphia Salon of the previous year the impression gained some footing that all photographers were of two classes — real pictorial ARTISTS — in the large capitals (chiefly resident in the original thirteen colonies)— and plain camera workers. The "real artists" of the camera were often supposed to have had access to the inmost arcana of ideality and technic. There was a notion that a print in "brush platinotype" must of necessity take front rank over the humbler production on printing-out paper. In general the error had become rather prevalent that photographic fine art was mostly a matter of medium rather than of temperament and vision. Many a worthy striver after true artistic expression found himself discouraged, forsooth, because he had neither time nor inclination to dabble in gum bichromate or platinotype. He felt, somehow, that plain silver paper was under the ban of all the high priests of artistic photography. He sent no work to the Salon jury.

Then came the Chicago Salon and with it a new revelation of an axiom: That art is independent of the means of its expression; that any medium which amply realizes the thought of the artist is defensible in the fine arts. Second, the Salon showed that camera workers had begun to recognize this axiom and were using the ordinary materials of the photographic art in the ordinary way, guided, however, by a much finer sense of artistic fitness than ever before. In this Salon there was good composition, good translation of light and color, tonality; good workmanship, much sincerity, some bombast, some vanity. Speaking generally, there was less self-styled high art than had been looked for and a good deal more fine art than any one had dared to expect. That is to say, there were fewer pictures on the walls which caused pangs of regret for good negatives belied by garbled "manipulative" prints, and more which evoked the admiration due to faultless negatives fittingly translated upon paper.

To speak plainly, the best pictures in the Salon, including those by members of the jury and apostles of the extreme cult, were "straight photographs," conceived and



SIOUX CHIEF.
Joseph T. Keiley, New York.

Copyright, 1900.

ANNETJE.

Rose Clark and Elizabeth Flint Wade, Buffalo.

made perfect not by "brush manipulation" but by artistic feeling and knowledge of art principles. The worst pictures there, were certain much-vaunted creations in gum or platinum, wherein it was apparent that good negatives had been sacrificed on the altar of an egotistical camera cult.

In the future it will be safe for the most modest snap-shot amateur to go about his work unvexed by thoughts of his inferiority. No photographer is better than another by virtue merely of his medium. Merit in this art, as in all others, is coincident with purity of thought and feeling, clarity of vision, education of hand, and a sense of what is fitting and beautiful. The man who possesses these qualities of heart, brain and hand and applies them to his negative-making will produce works which no jury of selection can reject.

If anything is to be desired more than another it is that amateur photographers will soon begin to record the deep inner life of this world, this humanity and this age. Let us have less superficial dawdling with new methods and more sincere passion for the joys and woes, the comedy and tragedy of the great world. LOUIS A. LAMB.

LITERARY COMPETITION No. 14.

Another very excellent lot of papers came to hand for this competition, the most pleasing feature being the number of new writers that felt they had something worth saying. Our readers are fast realizing that it is not literary style we want, but good ideas told in the plainest and most direct language. The ideal writer is the one that takes up the least of the reader's time and brain effort while telling his story.

First Prize — E. C. Srigley, Woodstock, Ontario, Canada.

Accepted (not arranged in order of merit) — A. J. Light, E. C. Dymond, H. C. Earle, Mrs. H. Moser, T. T. Henning, W. L. McFadden, N. J. Melville.

THIS number of THE PHOTO-BEACON will reach thousands who ordinarily do not read the magazine. To them we would say that for years its principal aim has been to teach its readers sound elementary instruction in picture-making and that its chief feature in that direction this year is a series of articles on "Artistic Landscape Photography" by one of the foremost men of the day. Every issue contains about a dozen articles telling "how to do things." Ask your dealer to get it regularly for you.

PICTORIAL COMPETITION No. 24.

Very few competitors took part in this — local intensification — competition, and of these only one seems to have read the conditions carefully enough to see that it was *local* intensification that was wanted, not general. Only one prize, therefore, was awarded, and this falls to

William Eckstein, 1315 Second avenue, New York.

In the portrait sent in, the shadows are much under-exposed, and Mr. Eckstein improved the printing quality of the negative exceedingly by applying the intensifier locally by means of a brush as described in Part II of the "Reference Book."

Frankly, it is surprising how few avail themselves of the great possibilities of improving their negatives by intensification or reduction. At least seventy-five per cent of the prints we receive could be made into rather good things if the negatives were doctored a little, and surely any one who takes the trouble to learn about exposure and development should not mind the little more bother that is needed to learn how to intensify or reduce both generally and locally.

PICTORIAL COMPETITIONS FOR 1900.

Competition No. 26.—Reduction. Closes June 30.

Competition No. 27.—Flower pictures. Closes July 31.

Competition No. 28.—Local reduction. Closes August 31.

Competition No. 29.—Genre pictures, or pictures that tell a story. Closes September 30.

Competition No. 30.—Reducing excessive contrasts in a negative. Closes October 31.

Competition No. 31.—Landscapes. Closes November 30.

Competition No. 32.—Ray-filter pictures. Closes December 31.

RULES.

1. In the purely pictorial competitions, Nos. 27, 29 and 31, there is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given, also the printing process.

2. In the technical competitions, there should be sent, first, a print from the negative before work is begun upon it; second, another print showing the effect of the operations. Along with these should be sent a very brief description of the course of procedure.

Note.—Methods of performing the various operations are to be found fully described in Part II of "The Reference Book of Practical Photography." In No. 32, ray-filter competition, send one print made with ordinary plate, and one on color-sensitive plate with color screen.

3. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

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Third.—Books to the value of $1.
To be selected from our catalogue.

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AN ILLUSTRATED PHOTOGRAPHIC JOURNAL.
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of The Photo-Beacon Company.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

Accepted literary articles will be paid for upon publication.

Secretaries of photographic societies are requested to favor with brief reports of their meetings.

Subscribers advertising secondhand apparatus for sale or exchange, special articles wanted, help or situations wanted, *one insertion free.*

To insure insertion in any particular number, copy for advertisements must be received not later than the 20th of the month preceding.

All communications relating to The Photo-Beacon should be addressed to

THE PHOTO-BEACON COMPANY,
TRIBUNE BUILDING,
CHICAGO, ILLINOIS.
Eastern Office: 80 Wall Street, New York.

Negative by Doctor Detlefsen, Chicago.

FIRST PRIZE.

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. JULY, 1900. NO. 7.

THE SALON SOUVENIR.

Those of our readers who have invested in a copy of the souvenir are simply enthusiastic in praising the style in which it is gotten up. We tried to excel anything of the kind ever produced, and seemingly we succeeded. Less than three hundred copies are on hand, and those that want one should apply at once. Remember this is the first collection of pictorial photographs ever published in this country, and as only six hundred copies were run it will be very scarce at no distant date and possibly valuable. Price 50 cents, by mail 60 cents.

PROPOSED POSTAL CAMERA CLUB.

Mrs. Glazier's article on this subject in the May PHOTO-BEACON has drawn forth responses from an even dozen of readers. It seems to us that this is quite enough to start such a club agoing, for in England where such organizations are quite common, experience has shown that twenty is a comfortable number to handle. When vacancies occur they are filled through an intimation made in some photographic journal.

A very interesting phase of the work of a club of this kind is the club album or albums. Each member every month sends in one print to the conductor. These are mounted in an album and started round the members for their inspection and criticism. Some such idea as this might be followed out by this organization.

The following is the list of those who have expressed themselves as being in sympathy with such a movement :

Oliver McEuen, M.D., Shannondale, Mo.

Roy A. Douglass, Lock Box 1182, La Mars, Iowa.

Charles Rocharek, 571 West Twelfth street, Chicago.

William C. Smith, Woodruff, Utah.

George V. Robinson, Essex P. O., Nyack, Mont.

W. M. Boner, 6 Lawnview avenue, Cleveland, Ohio.

Miss C. M. L. Lewis, Box 75, Falmouth, Mass.

R. L. Rodman, Fredericksburg, Texas.

A. Rasmussen, Jr., 56 Pine street, New York.

Leonard D. White, M.D., Uxbridge, Worcester county, Mass.

Edward D. Stout, 102 West Eighty-fourth street, New York.

Robert Wilson, 508 Willson avenue, Cleveland, Ohio.

It is a little difficult for the editor to select out of this list of names one suitable to make the preliminary organization, but he feels it would be asking too much of Mrs. Glazier to undertake such work, especially as he understands she is coming East on an extended visit. Among the other names the only one he is familiar with is that of Mr. Robinson, with whom he has had some correspondence in the last few years. In his letters he showed business directness, and so he proposes that Mr. Robinson be requested to take hold of the club and set it agoing. We would, therefore, ask all those on the list and others interested to communicate directly.

The dues of the club need be but a small sum. Each member would be expected to pay the postage on the album to the next on the list, so that the actual expenses would be for postcards notifying when each member should receive an album, and from whom, also the cost of the albums. These, by the way, should be of the loose-leaf type, so that each member can remove his own print and replace it with another.

LITERARY COMPETITION NO. 15.

A very practical series of articles were submitted for this competition and the following are the selections we have made:

First Prize.— James E. Taggart.

Accepted (not arranged in order of merit): A. L. Fitch, W. S. Meyers, W. R. King, Clarence Goodhue, William E. Brown.

PICTORIAL COMPETITION No. 25.

In passing on their awards in this competition the judges wished the editor to tell his readers that they based their judgment entirely on the artistic merits of the pictures submitted and not in the least on the appearance of the young folks. They consider the editor to be brave to the extent of being foolhardy in arranging such a competition, and even they, although unknown to The Beacon readers by name, now walk the streets in fear and trembling, lest some slighted parent get after them with a shotgun. Close on two hundred prints were submitted in this competition, and the majority were very interesting, as they contained a world of human interest. Very probably they would not satisfy salon judges, but salon pictures do not always please good photographers, principally because the human interest is lacking, and, frankly speaking, the editor is just human enough to prefer human interest to tone values and such like. When both are combined, good; but when only one is possible, then he wants the human interest.

The following are the judges' awards:

First Prize.— Doctor Detlefsen, 2769 North Lincoln street, Chicago.

Second Prize.— Ira A. Eberhart, 3626 Sixty-third street, Chicago Lawn, Illinois.

Third Prize.— John R. Coryell, Cornwall, New York.

PARTICULARS OF WINNING PICTURES.

First Prize — Made April 15, 3 P.M., at attic window with east light, Seed's 26 X plate, stop No. 4; exposure three seconds. Printed on platinotype.

Second Prize — Made ——— 8, by light from ordinary double window, Premo camera; Nehring's portrait addition being used with the ordinary lens, largest stop, Seed's 27 plate. Dekko rough paper.

On account of the extreme lack of interest shown in the technical competitions we have decided to drop them entirely and substitute purely pictorial subjects in their place. So for the remainder of the year the various competitions will be as follows:

Competition No. 27.— Flower pictures. Closes July 31.

Competition No. 28.—"At Home" portraiture. Closes August 31.

Competition No. 29.—Genre pictures, or pictures that tell a story. Closes September 30.

Competition No. 30.—Snap-shot pictures. Closes October 31.

Competition No. 31.— Landscapes. Closes November 30.

Competition No. 32.—Ray-filter pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given, also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

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ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F.R.P.S.

CHAPTER VI.

In regard to the choice of locality and the nature of the country in which we propose to seek our picture-making material, a few words of advice may not be without value. It is in itself a matter of comparatively small moment what the special natural features of the country in which we happen to be located are, provided that we possess sufficient artistic perception to recognize the pictorial possibilities of a subject whenever we come across promising material, and have sufficient technical ability to carry out our ideas.

Here the photographer is seriously handicapped as compared with the painter, for the former possesses only to a very limited extent the power of eliminating that which is unnecessary or detrimental to the subject. But, as we shall presently show, there are means of suppressing undesirable subject matter and of emphasizing that to which it is desired to direct attention, whereby we may exercise more control over the final result than to the uninitiated would appear possible.

Many landscape photographers, we think, fail to realize the kind of scenery, or rather class of subjects, that best lend themselves to photographic treatment. Many appear to think that in order to command success it is necessary to seek the picturesque, the sublime, or the grand. Now a greater mistake than this could not well be made, for scenery of this description usually presents difficulties which are well-nigh insuperable. Simple subjects will, in the majority of cases, make the most satisfactory and pleasing photographs. Choose such, therefore, and leave the majestic and the grand to the painter. Recollect always that the ultimate effect will depend as much, or, indeed, more, upon the way in which the subject is treated than upon its nature. There are few subjects, however apparently commonplace and ordinary in themselves, that may not, by careful treatment, be almost idealized.

I do not recommend the plan often adopted by photographers, of journeying to a particular locality, and then tramping through it with the camera, putting up the latter and exposing a plate when something pretty or pleasing arrests the attention, very much in the same way as a sportsman shoots at anything coming within the range of his gun. Such methods should not commend themselves to the thoughtful pictorial worker. Picture-making, whether it be by photographic or any other agency, is a matter which demands far more thought and care than can be bestowed upon it under such circumstances. A really satisfying and well-expressed result can rarely, if ever, be secured by such haphazard means. A pictorial photograph must be something more than a faithful representation of the subject portrayed : it must suggest the sentiment, or idea, or, as an artist would say, the "motif" which its producer is seeking to convey to the mind of the observer. Think out your subject well, therefore, before attempting to make an exposure, and do not be discouraged if, when you have done so, the result does not come up to your ideal ; expose another plate, or six, or a dozen, and do not rest content until you have attained some measure of success. The man who is never fully satisfied with his work, but is always striving to produce something better than he has hitherto attained to, will generally be in the forefront of his competitors.

Speaking of the choice of locality, the most successful photographic work, from the pictorial point of view, will generally be accomplished in districts in which there is not an overabundance of those elements which are usually supposed to entitle the neighborhood in which they are found to such epithets as "grand," "sublime," "beautiful," and so on. Amid such surroundings the very richness and abundance of nature's charms will dazzle the eyes of the photographer, and unless he be exceedingly careful, make it well-nigh impossible for him to produce a really satisfactory and

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* Copyright, 1900, by F. Dundas Todd.

pleasing result. It is extremely difficult for the most skilled worker to succeed under such conditions, and those lacking training and experience will almost certainly be disappointed with the result of their labors. All attempts at pictorial photography succeed best when the subjects are essentially simple in their nature. Let your constant care be to ascertain what you can spare and omit, rather than worry as to how much more subject matter you can squeeze into your composition.

Let us take, for example, such a view as that shown in Fig. 20, which tempted us to expose a plate. The natural beauty of the scene is undeniable, and we were lost in admiration for the freshness and brilliancy of the bright spring atmosphere, the vivid green of the young foliage and the warm glow of the sunlight as it was reflected in a thousand glittering spangles on the young buds. We were dazzled, as it were, with all this beauty as the eye wandered from point to point, and we did not pause, before

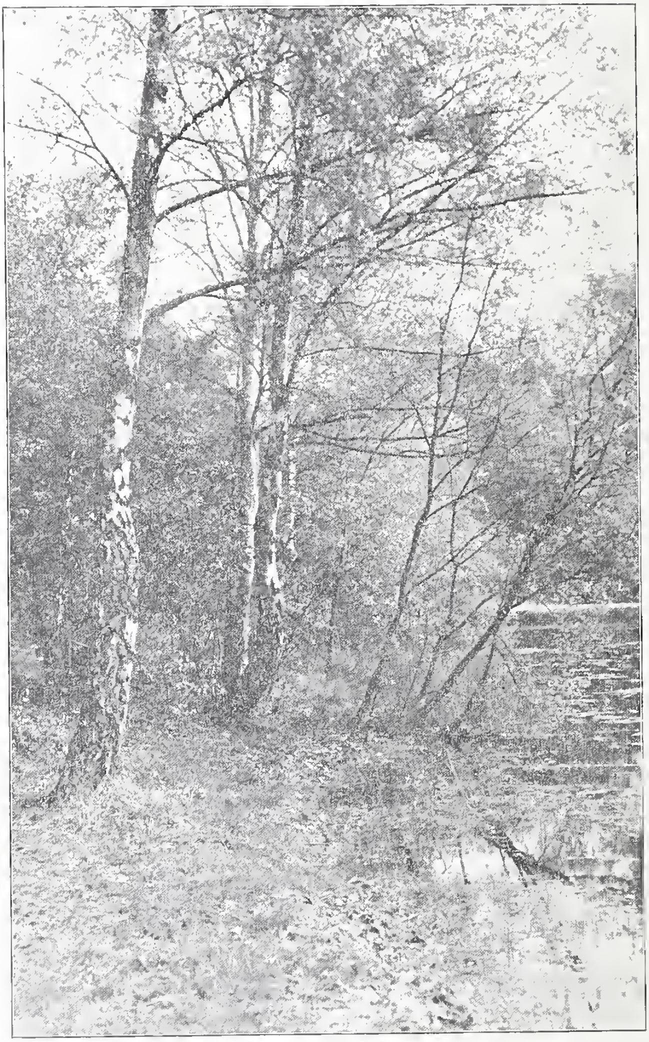


FIG. 20.

removing the cap from the lens, to analyze our feelings or the motives which prompted us to make an exposure. We simply thought "how beautiful" and straightway made an exposure without stopping to consider what kind of rendering photography would give of such a scene. We did not for the moment realize the beauty of the scene was, to a large extent, dependent upon its color, and that the particular effect of light and shade and color which gave us so much pleasure would be reproduced in our photograph as an irritating mass of spotty lights and shadows, and that, deprived of its charm of color, the photographic rendering of the scene would be quite commonplace and ordinary.

To prove, however, that such subjects by suitable treatment may be dealt with successfully, we will make a fresh attempt. This time, however, we were careful to choose a day when the lighting was soft and subdued, when a "feeling" of atmosphere prevailed and the forms of distant objects were slightly

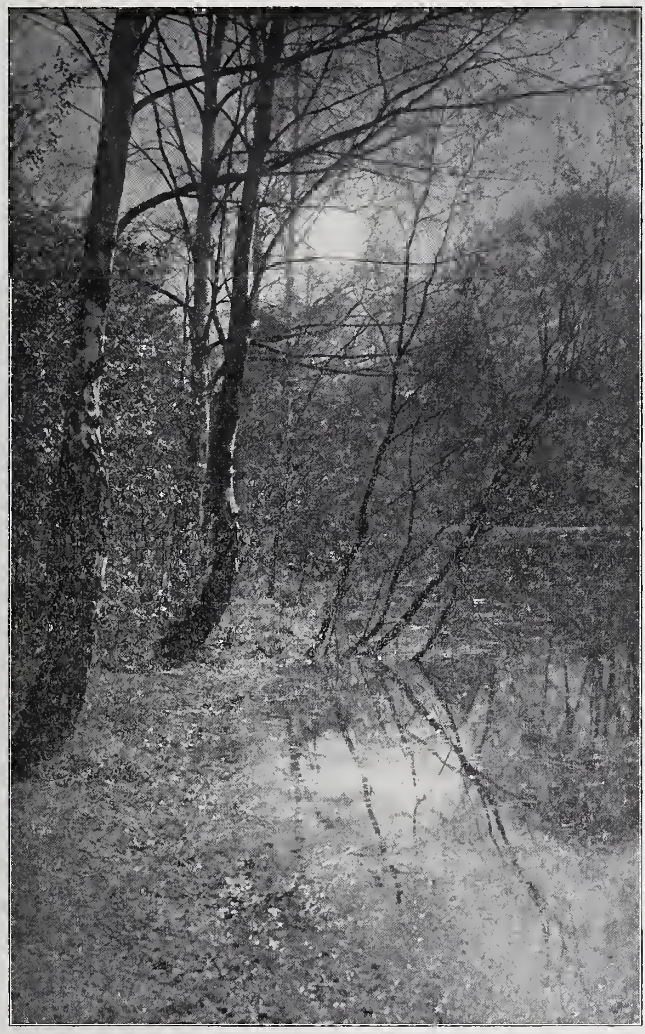


Fig. 21.

veiled or obscured. We made our first exposure in the middle of the day, probably the most unfavorable time that we could have chosen, but now we purposely wait until near sun-down, when the shadows are long, and the rising evening mist imparts a delicate atmospheric effect to the scene which is absent at any other time. In focusing, we, of course, bear in mind all that has been said in the chapter dealing with that important matter, and we take especial pains to avoid getting any portion of the picture unduly sharp, and refrain from gratifying any mistaken desire to secure unnecessary detail by unduly stopping down the lens.

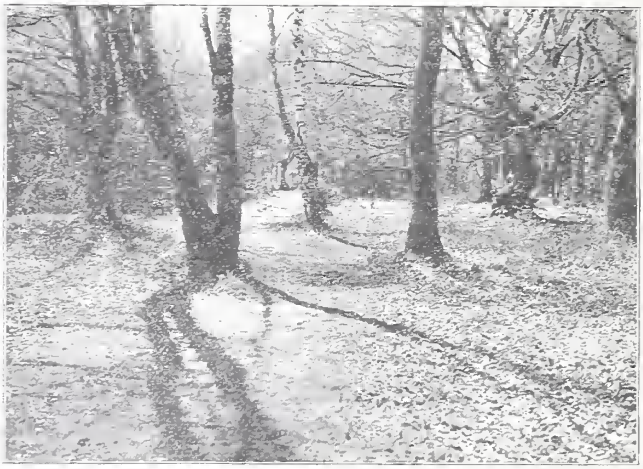


FIG. 22.

We have chosen, it will be seen, to wilfully disregard an axiom which is generally to be found in the technical textbooks, namely, to avoid pointing the lens toward the source of light. The same authorities tell us that the infraction of this rule will inevitably result in a fogged plate. Were it so the possibilities of pictorial photography would be much more restricted than they really are. The truth is that some of the most beautiful effects of lighting are only to be obtained by working in this way. But at the same time the system is one which, if unskilfully employed, is capable of producing the most unpleasing and inartistic results. Artistic knowledge and technical skill must both be invoked if the final result is to be pleasing. If you are satisfied that a particular effect is a suitable one for photographic reproduction, depending perchance mainly on a fine distribution of light and shade, rather than upon a vivid or beautiful scheme of color, then by all means disregard the conventions of technic, and, using proper precautions, do your best to secure a negative.

The chief practical difficulty is in avoiding chance reflections from rays of direct light striking the lens, or its setting, and so causing flare or fog. This must be guarded against by using a sky-shade or shutter which can be adjusted to shut out the intruding beams of light. We may very often effect the same object, even when working right in the sun's eye, by shifting the camera until we get a trunk of a tree, or a bough, to intervene between the sun and the lens, and so shut out the actual direct rays. We have an example of this in Fig. 22, which was taken with the sun shining full into the lens, the result being that a very natural and pleasing effect of lighting was produced.

The second practical difficulty is in correctly estimating exposure. Beginners usually fail by giving too little, the consequence being that the shadows are badly rendered and all half-tone and atmosphere cut out and killed. In such cases it is well to remember the time-honored adage, and *expose for the shadows*, which must be properly rendered if the result is to please ; the lights will take care of themselves, and slight over-exposure will only tend to reduce their hardness. In the example under discussion I gave ten seconds exposure with a lens aperture of *f* 11, which many would probably consider excessive, but were I to repeat the exposure under similar conditions I should prefer to increase it to fifteen seconds.

There is only one kind of plate that will do full justice to this kind of work, and that is the isochromatic or color-sensitive, and it is essential that it should be backed in order to prevent excessive halation. I say "excessive" advisedly, for in subjects such as those we are considering a certain amount of halation is both natural and desirable, and, if we have any regard for truth of effect, essential. If we look at the sun shining through and behind tree trunks in any woodland glade we shall always see the blurred appearance which photographers call "halation." It is in many cases a perfectly natural phenomenon and may with advantage be reproduced, bearing in mind, of course, that the tendency of photography is generally to exaggerate rather than subdue such phenomena.

Let us now return to a critical comparison of the two renderings of the same view which appear in Figs. 20 and 21, which our worthy editor has kindly reproduced on opposite pages in order to facilitate our examination. Why is Fig. 22 so much more satisfactory and pleasing than its neighbor? The subject is practically identical, though, as we have already seen, it received very different treatment in each case. Fig. 20 fails to please chiefly because of its "spottiness," or the general scattering of the lights and shades, which has deprived it of "breadth," an essential attribute of a good picture. By "breadth" is meant a harmonious disposition of light and shade ; and "spottiness" is the antithesis of this quality. The photographer will often experience the greatest difficulty in securing breadth of effect in his landscapes, for nature lights them with a lavish and indiscriminating hand, and it will be frequently necessary to subjugate and control them by methods which we propose to describe in our next chapter, and which we have invoked in the production of the rendering shown in Fig. 22, in which it will be seen the undesirable attributes to which we have referred have to some extent been subdued or removed.

DOCTORING AND CARING FOR NEGATIVES.

In China doctors are paid for keeping their patients well. That is the correct principle. One should begin to doctor before he gets sick. It is just the same in "doctoring" negatives. The time to begin is when the exposure is being made, and it should continue until the negative is ready for the printing-frame. Careful and experienced workers seldom make negatives that require "tinkering." But this paper is for beginners, so let us start at the beginning.

UNDER-EXPOSURE.—This is quite a common disease. The negatives made by reckless "button-pushers" are particularly affected by it. The symptoms are plenty of detail and density in the high lights, just the reverse in the shadows. An under-timed negative will show a positive on the film side. If known to exist before or recognized during the early stages of development, it may be helped a little by prolonged treatment in a dilute developer. But the disease is incurable, and should be guarded against with great care.

OVER-EXPOSURE. — Though serious, this is not necessarily a fatal disease. The symptoms are lack of contrast and a veiling of both lights and shades. If known to exist before development has begun, very great over-exposure can be compensated for. If not suspected until the image begins to appear while being developed, the negative should be removed at once, the developer rinsed off, and the developing completed in a strong developer to which has been added a few drops to the ounce of a ten per cent solution of bromide of potassium. Here is a developer that I have used for over-exposure with excellent results:

A.

Water	12	ounces
Hydroquinon	¼	"
Bromide potassium	¼	"
Sulphite soda	2	"

B.

Water	12	ounces
Sal soda	2	"
Sulphite soda	2	"

For use take equal parts of A and B. Over-timed negatives that have been treated in normal developer will show a positive on the glass side. They are then past hope of improvement by "tinkering."

Under-development.— This can be readily recognized by even a novice. The negative will be thin and flat, with good detail in both lights and shades. It can be remedied by intensification. Formula comes with every box of plates, but the following is my favorite:

Bichloride mercury	1	dram
Bromide potassium	½	"
Water	4	ounces

As the mercury dissolves very slowly it is well to keep this solution on hand. It should, however, be labeled with a skull and cross-bones, for it is the most deadly poison in common use by photographers. Negatives that are to be intensified should be *thoroughly* fixed to guard against white patches and stains. They may be treated as soon as washed, but it is better to allow them to dry first. When a negative is placed in the intensifying solution a white deposit will form on the film. If it requires a great deal of intensification it should be left until this action ceases, when it is rinsed and immersed in a solution of sulphite of soda. The stronger this solution is the more rapidly it will work. The sulphite will turn the white mercurial deposit black, after which the negative must be thoroughly washed to remove the excess of sulphite.

Over-development. — This disease need cause no great anxiety, as a complete cure can be readily effected. The symptoms are great density with good contrast and detail. The treatment necessary is reduction. Here is an excellent formula:

Water	16	ounces
Ferri-cyanide of potassium	1	ounce

The bottle in which this solution is kept should be labeled "Poison," and wrapped in yellow or black paper to protect it from the light. For use add ½ dram of this solution, and a lump of hypo about twice the size of a pea to four ounces of water. A reducer of this strength will work quite rapidly; so the plate must be removed and thoroughly washed the moment it is sufficiently reduced.

Too Much Contrast.—This is caused by under-exposure and contrasty light on your subject. In both cases the only cure is prevention. If you must take a picture where the light gives too much contrast, give from five to ten times normal exposure and develop with normal developer. This will greatly reduce the contrast and it is the best that can be done under the circumstances.

Fog.—The name describes this disease. A fogged negative is like the subject would appear on a foggy day. It is caused by an unsuitable developing light, a leaking camera on plateholder, a warm developer, or one containing too much alkali. It is quite incurable.

Spots.—Usually caused by dust on the plate during exposure. Clean out your darkroom, dust the interior of your camera and plateholders, and instead of the camel's-hair brush use a soft flannel cloth to dust your plates and the trouble will disappear.

Caring for Negatives. — Not half enough attention is given to the care of negatives. Probably the reason is that photographers are such a lazy set of fellows. And this does not mean professionals alone; amateurs are often quite as bad.

Some time ago I called upon an amateur whose work, from both an artistic and a scientific standpoint, was away above the average. He wanted to show me some negatives, but it was necessary to search for them among a lot of about two hundred that were piled carelessly upon a shelf.

"Why don't you have some system about cataloguing and storing your negatives?" I asked.

"I'm going to when I get time," he replied.

I began to examine the negatives as he laid them in a heap on his developing table. Selecting several that had been scratched by careless handling I called his attention to them.

"Don't you know," I asked, "that you are ruining your negatives by your lack of care in handling them?"

He looked at the scratches and then replaced the negatives on the pile.

"Oh, I don't care for them," he said carelessly. "They are not much good anyway."

I said nothing more, but I did some thinking. I thought it would take him longer to hunt through his negatives a few times than it would take me to catalogue them so that I could put my hand upon any one in the lot at a moment's notice. I also thought that a negative that was not worth caring for was not worth saving. I am quite sure the readers of this journal will agree with this last conclusion; if not with the first.

Negative by John R. Coryell, Cornwall, N. Y.

NOT QUITE SURE.

During the days of albumen paper varnishing was necessary, but it is seldom practiced at the present time. There is quite a knack about varnishing, and so seldom will the amateur need to practice it that it is scarcely worth the learning; for unless a negative is well varnished it is worse for the operation. If you use albumen, plain silvered, or any other paper that is liable to stain the negative, here are two substitutes for varnishing that can be much more readily handled. The first is this: Take the dry negative after all contemplated "doctoring" has been attended to and heat it in any convenient way. It should be as hot as can be borne on the hand. Now with a camel's-hair brush or a wad of cotton paint the film side with melted paraffin and wipe the surface with a clean wad of cotton to remove the surplus wax. When the negative cools water may be spilled upon it and wiped off without injury to the film. Here is the other method: Immerse the dry negative in a ten per cent solution of bichromate of potash. After ten or fifteen minutes remove and dry in a light place without washing. Gelatin treated with bichromate of potash and exposed to the light becomes insoluble even in hot water. I treat all of my valuable negatives in that way.

Every writer who has anything to say on the subject advises a different way of handling negatives. Some of the advice that I have read is good, much of it is bad. Of the latter sort I want to mention one thing that I have seen published more than once. That is, the packing of negatives film to film in plate boxes. *Don't do it.* It is almost impossible to remove them without scratching those that lie film up. If you stand your negatives on end have them *film side in.* If you pack them in boxes put them *film down.*

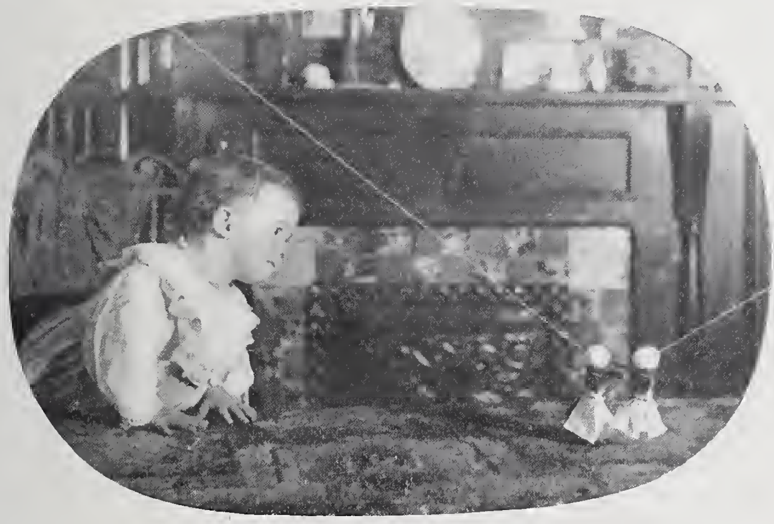
I furnish all of my negatives with a mat of black paper, pasted on the film side. I have practiced this for several years, and though I have moved around a great deal and packed and unpacked my negatives repeatedly, I have never had one scratched or broken. So far as I know this method is original with me, but I shall make no claim of discovery. If the reader has known and practiced it before he will add his endorsement to mine; if not, I can unhesitatingly recommend that he try it.

Any one who has tried knows how difficult it is to cut out a mat from one piece of paper. But since the mat is to be pasted to the negative permanently it may be made of four straight strips, overlapped at the corners. The width of these strips must, of course, depend upon the negative. If it is desired to retain in the print as much as possible of the negative, they may be but an eighth of an inch in width. But mat out all that does not properly belong in the picture — all that can be spared without detracting from its artistic merit. Many photographers dislike the idea of trimming down their prints. They seem to think that trimming a 4 by 5 down to a 2 by 3 is just so much loss. This is especially true if one uses embossed mounts. The temptation to make the print fit the mount is often too great to be resisted even when the necessity of trimming is admitted. I have one 6½ by 8½ negative that is matted down to print only 1¾ by 6. It is a *picture*, but if it were printed the full size of the negative it would be only a very poor photograph. If one *will* use embossed mounts the white border left by the mat may be retained the full size, so that the print will still fit the mount.

Suppose a 5 by 7 negative is to be matted, ½-inch being taken from both top and bottom, an inch from one end and ¼-inch from the other. From a sheet of black paper cut two strips 7 inches long by ½ inch wide. Cover one side of these strips with common starch paste just as you would a print in mounting. Place them in position, cover with a blotter and roll lightly with a print roller or rub down with the hand. Cut two more strips 5 inches long; one an inch, the other ¼-inch wide. These strips when in position will overlap the others so that there will be a double thickness of paper at each corner. This in no way interferes with the printing and it insures protection from scratches when the negatives are packed.

The negatives may be numbered by writing in one corner with a pen and common black writing ink. The numbers must, of course, be written backward, but a little practice will enable one to do this without difficulty. If one dislikes to see a number on his pictures, a strip of white adhesive paper may be pasted to the mat and the number written thereon.

An excellent adhesive paper is made by fixing gelatin printing paper (spoiled proofs or trimmings will do) in a plain hypo bath. When thoroughly fixed, wash and dry just as you would prints. It is then ready for use and by simply "licking" it as you would a postage stamp it will stick to glass, paper, metal, wood or almost any substance that is not oiled.



Negative by F. C. Bangs, San Francisco.

THE REFEREE.

Now, a few words about cataloguing. I find that it pays to register every particular about every negative that is worth keeping. Negatives that are failures or of but transient interest I never trouble about registering.

For a register I use a common copybook measuring 6½ by 8½ inches and costing 5 cents. As I use the double page this gives me thirteen inches in which to write a description of each negative. The book is ruled in one direction, the other way I rule it with an indelible pencil. The reproduction here shown will illustrate my method quite fully. The exposures are registered in seconds or fractions of a second. Everything else is self-explanatory.

No.	Date.	TITLE.	Time.	Light.	Stop	Exposure.	Developer	Doctoring.	REMARKS
35	July 12	Mt. Rainier........ ..	6 P.M	Sun	F. 16	2	Pyro	.... .	Undertimed foreground
36	July 18	Paradise Valley and Tattoosh Mountains	10 A M.	Sun	F. 32	$\frac{1}{5}$	Amidol	Intensified	....

A plate box will hold fifteen matted negatives. In storing, place a piece of soft paper in the bottom of the box. Beginning with the highest number to be stored in that box put in the negatives *film down.* If the box contains negatives numbered from 1 to 15, No. 1 will be on the top and No. 15 on the bottom. This enables one to more readily find any desired number than when the opposite order is followed. On the end of the box may be written the highest and the lowest numbers it contains, as 1–15, 16–30, and so on.

If this method of storing and cataloguing negatives is followed it will be only the work of a moment to find any desired number, and scratches from handling will be unknown.

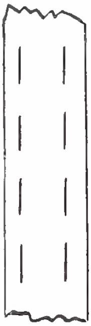
J. Edgar Ross.

HOW TO BIND THE PHOTO-BEACON.

Among the large number of readers of The Photo-Beacon there are no doubt quite a number who save the numbers, and if they had a little knowledge as to how to bind them, would probably do so.

I usually bind all my papers, and find I have a very handy volume of useful information, and bound as neatly and strong as any bookbinder could do it. The following directions and cuts will make it an easy matter to bind them.

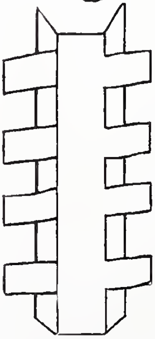
Fig. I.



Take The Photo-Beacons and tear off the outside cover and advertising pages, then with a sharp knife cut away all the hard surplus glue which may be sticking on the back. Next remove the wire fastenings which hold the pages together. You will find, then, that several of the pages come apart. Get a bottle of mucilage and paste about a quarter inch along the back edges and stick all loose pages together. When all loose pages are stuck together, from the January number to the December number, take the December number and paste a quarter inch along the top back edge, lay it flat on a table, and lay on your November number; again paste the top back edge and lay on the next number, and so on, until you have all the numbers stuck together; the January number will then be on top. Be careful in sticking your monthly numbers together to have them even and square at the back.

Then get some plain white paper and cut two leaves the size of The Photo-Beacon pages, and paste one at the bottom and one at the top, of course pasting them on at the back edge. They will be your fly-leaves or blank leaves in the finished book.

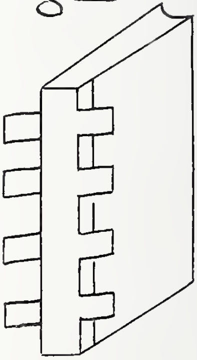
Fig. II



Next get two pieces of wooden board about the size of your papers, and lay them between the boards with the back edge even with the boards, and clamp boards and The Photo-Beacons firmly together. If you can get the use of a letterpress, it would be the best thing to press them together. When they are firmly pressed, have a bottle of Royal Glue handy; the same can be bought at any drug store for 10 cents, and it is a powerful sticker. Apply one coat to the back of your papers; when dry, apply a second coat. You will now find after the glue is dry that all papers are firmly stuck together, and the same can be conveniently handled for finishing.

Next get a piece of white muslin, 1½ inches wide, and the length of your bound papers, and cut eight slits in it one inch long and ⅝-inch apart, or the thickness of your bound papers; the muslin with the slits will look like Fig. 1. Then get four strips of muslin 3 inches long and 1 inch wide, and pull them through the slits like Fig. 2, and apply a drop of paste on the under side between the muslins to hold strips in place. Now apply a coat of your Royal Glue to the inside part of the muslin, and stick the same to the back of your bound papers, like Fig. 3. The 1-inch strips must not be pasted on the ends; they are left hanging loose, and are used for fastening the book to the cover.

Fig III

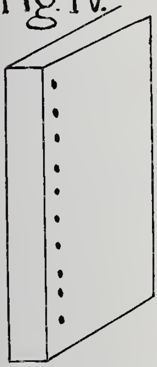


Now, having your muslin well glued to the back and lapped over on the top and bottom pages, draw a straight line along the same about ¼-inch from the back, and mark periods along the line like Fig. 4.

Then with an awl or some other pointed instrument punch holes entirely through your bound papers.

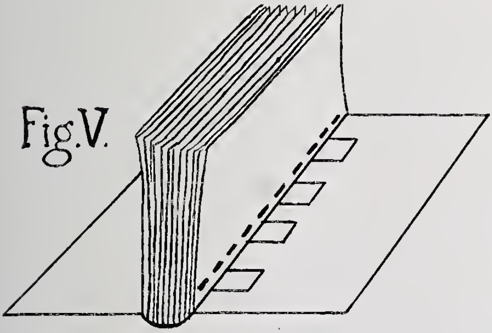
I use a revolving awl for boring the holes; an easy way to make the holes is by driving "six-penny" wire nails through, but care must be taken to drive them through straight and out through the opposite side of the overlapping muslin. Next get some good linen thread and pull the same through holes and tie firmly at each end.

Fig. IV.



Then take your bound volume to some job printing-office and have them trim off the uneven edges, also get some cardboard and bookbinders' cloth for making the cover. The cardboard I use is a light-gray color and very tough. Cut two pieces of cardboard one-half inch longer and a quarter of an inch wider than the size of your bound papers, which will give you sufficient projection to your bound volume. Now lay your bookbinders' cloth flat on a table, inside part up, and lay your two pieces of cardboard on top of same side by side, one inch apart. The space between the two cardboards is for the back of the book or hinge part, and should be very nearly half an inch greater than the thickness of your bound papers, to allow plenty of room for the opening and closing of the book. Then with a pencil mark around the edges of cardboard, and with shears trim the cloth, allowing about a half inch for overlapping. Now apply a liberal coat of paste to the cloth and stick on your cardboard, rubbing the same in close contact with a soft cloth; then fold the corners nicely to make them square.

Fig. V.



A good paste can be made by soaking 1 part of good glue in 10 parts of water; then add 4 parts of starch and hot water until you get the right consistency.

When cloth and cardboard are firmly pasted together lay the same out flat, place boards on the same and weight it down until dry; that will keep the cover from warping. When thoroughly dry lay the cover out flat, inside part up, take your bound volume, apply royal glue to the loosely hanging inch strips, place the back of the volume on the cover exactly in the center, paste down your end strips like in Fig. 5, place a box or books on both sides of the upright leaves and let it dry. Next get a sheet of white paper just twice the size of your bound pages and double the same in the center, then cover one-half of the same with paste and stick it on the inside of your front cover. Apply some paste to the overlapping muslin and sewed part and press your second fly-leaf against same; repeat the same for back inside cover and seam. If your second fly-leaf is too large trim it down even with the rest of the pages.

Place the book under weights and leave to dry.

Cost: Royal glue 10 cents, common glue 5 cents, cardboard 5 cents, bookbinders' cloth 5 cents, white paper, thread, etc., 5 cents — total 30 cents.

A. G. Graff.

STEREO PICTURES WITH SINGLE LENS.

After reading the article of J. Edgar Ross, on "Practical Stereography," in the December issue of The Photo-Beacon, I have wondered if there were not some readers of that valuable journal who would like to share in the use of a couple of small instruments that I have made for myself, to enable me to make stereographic pictures with almost as much ease as to make a single exposure.

My apparatus consists of a table on which to fasten the camera, and a slide for making two exposures on one plate.

To make them, procure from your dealer one tripod screw and one screw plate, such as are used on all hand cameras up to the 5 by 7 size. Select a hardwood board that can be sawn 4 inches wide, 10½ inches long and ⅜ inches thick; then plane down to 5/16 inch thick, and for convenience round off the corners to half a circle. (See Fig. 1.)

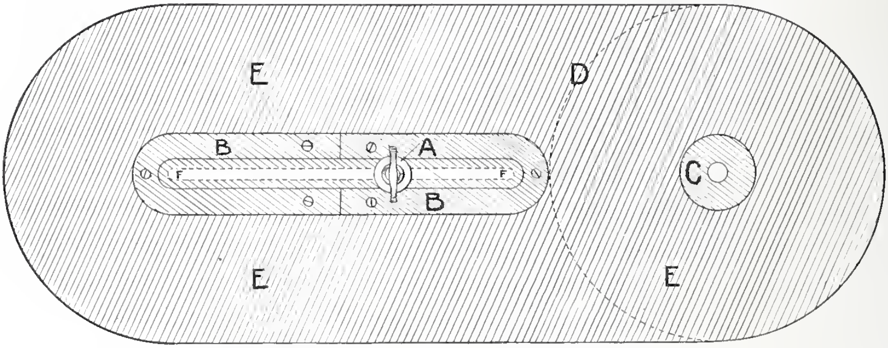


Fig. 1.

Countersink screw plate at the point marked C, which will be 2 inches from the outer edge; then 2 inches from the other end of board E mark a place F, and 6 inches to the right of board E mark F′. Cut a slot in the board ¼ inch, extending from F to F′, so that the tripod screw can move 4 inches in the clear, which will leave F and F′ the axis of the screw.

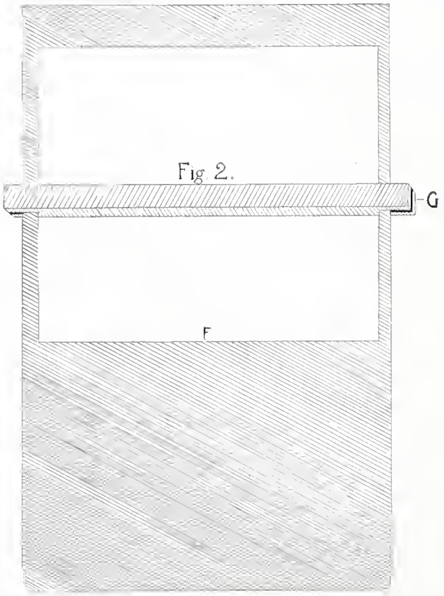


Fig 2.

Next procure two pieces of metal, brass preferred, and file them to the shape of the two pieces shown as B, Fig. 1. The inside slot should be 3/16 inches wide and 2¼ inches long in each piece. Each should be drilled for three screws and firmly screwed to the table E. Before fastening down the last one, the tripod screw should be put in place, so that it will be held by the metal strips; if necessary, put a small washer on the shoulder of screw (see A, Fig. 1), which completes the table.

To make slide take a piece of copper, such as you can find at any tin-shop — not finding copper, use tin or galvanized iron — 5½ inches wide and 8¾ inches long. Mark line F, Fig. 2, 3¾ inches from one end, then mark out and cut out a rectangle 5 by 4½ inches, which will leave slide as shown in Fig. 2.

Next take a piece of wood 6 by 5/16 by 3/16 inches after it has been dressed (Fig. 3). (I used a piece of a cigar box.) Next cut out slot G ½ inch long, which should be just wide enough to allow the thickness of the copper slide to move in it. Place the bar just made into the opening in the slide, inserting the small arms of the slide into the slots of the bar. Next glue a piece of wood into the projecting ends of the slots that are not quite filled by the slide. This will allow the bar to move freely up and

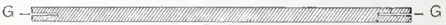


Fig. 3.

down on the slide without any danger of its being lost.

If your plateholders do not have catches that will hold a $\frac{5}{16}$-inch bar, take a small screw-eye and straighten it out as in Fig. 4, and screw it in the top of your plateholder the same as the one already there.

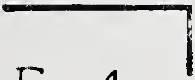


Fig. 4.

This completes the apparatus. To use it, set up your tripod and fasten the table, Fig. 1, to it, having the table stand at right-angles to your intended picture. Fasten your camera to the table by means of the tripod screw A, sliding your camera to the right hand of the slot, and fasten securely. You should have your ground glass and view-finder accurately marked through the center, dividing them into right and left halves. Focus your picture upon the right side of your ground glass.

When this is done, insert the plateholder in camera, remove the rubber slide, and insert the copper slide, being careful not to push it past the valve until you have fastened the bar of slide to the plateholder, so as to shut out all light from being admitted through the top of holder. Next push the slide clear in, which will leave the right hand of the plate ready for the exposure. Expose the same as for any other picture. After exposure, move your camera to the left of table from three to four inches, according to the distance you are from your object; by aid of your view-finder locate exactly the same picture on the left-hand side of the plate that you had on the right, and draw the slide from the left side of the plateholder to the right, so as to protect the right while the left is being exposed.

After making the second exposure, which, of course, must be as nearly like the first as circumstances will allow, remove the copper slide from plateholder and replace other slide as in all other work.

If the work has been properly done, the two pictures will be as evenly divided as if they were taken on separate plates.

I also find another use for the slide, as you can take two pictures on one plate where you do not care to use a large plate for a small picture.

In the above directions, all measures are given for a 5 by 7 camera; for any other size you will have to alter the dimensions to suit the size of the camera.

C. W. Hackett.

ON APPARATUS.

As circumstances make the man, so does the apparatus make the photographer. Some people are all circumstance; some photographers are all apparatus — both are overburdened with the weight. As a means to an end, both too much circumstance and too much apparatus are in the way, and keep their apparently fortunate possessors from gaining the desired goal.

Two photographers recently went out to catch shadows, the one had apparatus of the most improved and perfect make. Whenever the opticians or cameramakers or shuttermakers invent anything new, they send it to him on approval; they have done so for the last twenty-five years. The other photographer had only an antiquated camera which he had picked up cheap when he began business, also twenty-five years ago, and one lens; his companion, by the way, had a whole battery of lenses, one of which was a host in itself.

Having got to their destination, the photographers proceeded to limber up. The one with the perfect apparatus soon, however, ran for shelter during a slight shower, while the man with the old camera caught two or three effective shadows of wet roads and quays, with the sun lighting up parts of them. By the time the rain had stopped and the new apparatus had ventured out the conditions had changed, and the streets and quays had assumed their prosaic every-day look — the poetry had gone with the rain.

Said the knight of the perfect apparatus to the other, "What did you work at?" "*f*8," replied the other. "Is not that rather a large aperture?" inquired the first. "Don't know," replied the other, "it is the only aperture I have got." "What! Have you forgotten your stops?" "No, I have never had any for the last fifteen years. You see, my dog took a fancy to the leather case they were in — ate it, in fact, so I kept the stops loose in my waistcoat pocket, and one by one they all got lost through the holes. I should not have said they all went, as I have one in the studio — No. 7 I think it is — which I put in when I have a copy to make." "Then," said the first one, "I see it all; the charm of your work, its beautiful softness, its atmospheric effect, its poetry, are all owing to the fortunate accident of the dog having swallowed the stops?" "Yes," replied the knight with the hole in his pocket, "whenever I got a fresh medal I always used to hang it round the dog's neck. When his collar was full all round I gave up exhibiting — honor to whom honor is due — but even by working at open aperture I am afraid I should never have been admitted into the Salon if it had not been that after I had bought my lens (I paid Dallmeyer seven carefully-saved-up sovereigns for it) I found I had hardly enough to buy a camera and legs with; the consequence is that, as you see, both are very shaky, and in a wind both vibrate freely. One day I remember having got some beautifully soft things of a wreck taken in a gale, which I left washing after development, and asked my assistant, who had just come with 'splendid testimonials'— I was, in fact, quite frightened of him, his testimonials were so wonderful — to take them out of the tank. The next morning, in going to look at my past day's work, I could not find them. On inquiring, my grand assistant coolly said that he had thrown them all away the previous night, as they were all out of focus."

The above print shows the effect of using Nicholson's New Trimmer. Full particulars of this tool can be found H. A. Hyatt's advertisement.

The photographer who has only one camera and one lens sets about his work with a freedom from anxiety his richer brother knows nothing of; he is never perplexed as to which camera to take out; it is no uncommon sight to see a wealthy amateur carrying a 4 by 5 and a 10 by 12, and then when he gets to his destination it is amusing to hear him lament that he has not brought his 5 by 7, and to watch him trying to make up his mind whether to wire home for his "whole-plate" or not.

It is interesting to note how photographers are returning to plates which measure 4 by 5, or, as the Yankees call them, "four-five." In the days of glass positives this was the favorite size; when carte portraits became the rage the extra width was of no use, and either quarter or half plates were used. With the advent of hand cameras 4 by 5 plates were reintroduced, but owing to limited demand for this size — quarters and halves being the sizes generally used — it was difficult to buy 4 by 5

Negative by John R. Coryell, Cornwall, N. Y.

MIRIAM.

plates when on a tour. Now that photographers have got tired of carrying large plates, there is a return to 4 by 5, which at this moment seems to be the size most in favor.

There is a point too often overlooked in developing small negatives, that is, it must be determined before commencing developments whether prints the same size as the negative are to be the end, or whether the negatives are to be used to enlarge from; if the latter is decided on, the image should be kept thin and the negatives not allowed to gain sufficient opacity to allow them to be printed from, or as sure as eggs are eggs the enlargements will be chalky and hard.

Developing negatives for others is very thankless work; if you do your very best with them, and make the negatives as perfect as possible, you will very likely hear your customer grumble about their being too thin to give a decent print. By a decent printing negative many seem to mean a negative which they can put out to print at nine o'clock in the morning with instructions to their landlady to take in at twelve, and find that the print is just done at six o'clock, the landlady, as usual, having forgotten all about it.

There are, of course, drawbacks to having but a slender stock of apparatus of a shaky kind; it is vexing, for the

Negative by John R. Coryell, Cornwall, N. Y.

JEAN.

(Third Prize.)

moment, to find on development that the sun has found its way through the cracks in the dark slides, and it is often a toil to have to carry a whole-plate set for miles when only a cabinet is wanted; but on the whole we think the man who goes out rabbit-shooting with the old gun which belonged to his grandfather has more rabbit pies than his neighbor who buys a new gun every year and gets his cartridges mixed.—*Photography.*

Frank M. Sutcliffe.

ALL ABOARD FOR MILWAUKEE.

A rate of one and one-third fare, certificate plan, has been secured for the convention. Be sure to ask agent for certificate when you buy your ticket. You pay full fare going; the certificate, when signed by the special railroad agent, who comes to the convention hall for that purpose, will entitle you to return ticket at one-third fare.

These certificates must be left with the treasurer when you enter the Exposition building. A failure to bring certificate, or the neglect to leave it with the treasurer, will prevent you from obtaining the reduction on return trip. All certificates must be in the treasurer's hands on or before Wednesday, July 25.

The following from the office of the Western Passenger Association may be of help in purchasing tickets:

"Under our rules certificates will be honored which show the purchase of going tickets not earlier than three days prior to the date announced as the opening date of the meeting, and during the first three days thereof, and if presented for return tickets not later than three days after the date announced as the closing date of the meeting (Sunday not to be accounted as a day in any case)."

No city in the country can entertain visitors better than Milwaukee. The Association has never had a president who has worked harder for the success of the meeting than has President Stein.

You may rest assured that your instruction, your entertainment and your comfort have been well provided for. Come to Milwaukee and see the best convention and the largest attendance the Photographers' Association of America has ever had. Below will be found a table of railroad rates from different sections of the country.

George B. Sperry,
First Vice-President.

NATIONAL CONVENTION.

EXCURSION RATES TO MILWAUKEE AND RETURN BY RAIL.

These rates are based on the certificate plan of one and one-third fare. Do not fail to ask for certificate when purchasing tickets:

Peoria, Ill	$ 9.10
Indianapolis, Ind	10.10
Toledo, Ohio	12.75
Toledo, Ohio, by rail and boat	9.85
St. Paul, Minn	13.00
St. Louis, Mo	13.40
Detroit, Mich	13.75
Detroit, Mich., by rail and boat	9.70
Louisville, Ky	14.10
Cincinnati, Ohio	14.10
Des Moines, Iowa	14.80
Pittsburg, Pa	19.40
Toronto, Can	20.00
Kansas City, Mo., via Chicago	19.50
Buffalo, N. Y	21.40
Topeka, Kan., via Chicago	22.15
Lincoln, Neb	22.60
Nashville, Tenn	26.10
Washington, D. C	26.75
Little Rock, Ark., via Chicago	27.20
Philadelphia, Pa	27.75
New York, N. Y	30.10
Boston, Mass	33.10
New Orleans, La	34.10
Dallas, Texas	39.35
Denver, Colo., via Chicago	43.15

PHOTOGRAPHING CHILDREN.

There is perhaps no branch of photography that has been tried so many times, has caused so many failures and disappointments to the amateur photographer as child photography. It is just as easy to photograph children if there is not too many of them as it is to take a landscape, when one knows how.

The first thing is the place, which should be outdoors. The time of day is from 8 to 10 A.M. and 3 to 5 P.M. Between the hours of 10 A.M. and 3 P.M. the sun is too high, so that the light comes too straight down to have a good lighting effect. The light comes almost straight down during the middle hours of the day. Make the exposure when the sun is obscured behind a cloud and not when it is shining bright. Use a large stop and medium fast speed on the shutter.

Do not attempt to hunt up some fine landscape for a background, for it is a picture of a child or children you are going to take and not a landscape, and you can not very well have both and make a success. The background will in all probability be out of focus.

See that the background is some dark object or objects, see that it does not include any object you do not wish to have in the finished picture, such as your neighbor's ash pile, tumble-down sheds, garden full of weeds, etc.

Do not take your picture against the sky, lake or sea, or the features will come out dark.

Place the child at least twelve or fifteen feet from the background.

Never focus on the child you are going to take a picture of; but place a chair or have some one else stand while you focus on them. If you are alone with your subject, which I prefer to be, drive a stick in the ground and hang a flower or leaf on it and focus on that, being careful to have it about the height of the child. When you have got your focus fixed and ready to make the exposure place the child just where you focused. One child is enough to begin on, other children or family pets only give you the more to contend with and some of them will be sure to spoil your picture. When you get your subject in the proper place take your position just where you want the subject to be looking in the finished picture — toward the camera or to the right or left. Of course you can not get

Negative by E. Auerbach, San Francisco, Cal.

PORTRAIT OF A CHILD.

farther than your shutter bulb will reach.

Both sides of the face should not be lighted alike or it will produce flatness, therefore the body should be turned slightly from the direct source of light. So take your position where it will cause the child to look and not be looking directly toward the setting sun, if in the afternoon. Wait till the child is taken up with something in another direction, then speak to it. It will at once look directly toward you, all unconscious that it is going to have its picture taken. As soon as it turns its head toward you make the exposure. If the child will not stay in its place let it run around and you wait till it gets on the spot where you focused and then speak to it, when it will look toward you.

Negative by John R. Coryell, Cornwall, N. Y.

ELSPETH.

Negative by Alfred L. Fitch, Chicago.

FIRST STEP.

The reason for not focusing on the child you are going to take a picture of is because it will become restless and by the time you are ready to make the exposure you will be unable to do anything with it.

If you wish to take a group of children take them at play. It is easier to manage them and they look more natural.

If you wish to take a picture when the sun is shining, get in the shadow of a building or high fence. The shade of a tree or trees are not very good places to take pictures, for some small streaks of light are sure to get through just where you don't want them and quite unnoticed till you get your print made.

If you want a picture without any distinct background, place your subject forty or fifty feet in front of some trees with dense green leaves. Use an ordinary plate which is not very sensitive to the shade of green, and in developing keep the negative rather thin, that is, not very dense. If not convenient to take the picture out of doors it can be taken in the house just about as easy and about as good, except, possibly, the background. I find a pair of portière curtains or a plain dark shawl make a very good background for indoor photography.

Focus the same as you would out of doors, place your subject in the proper place, uncap the lens, watch the child and when it has the proper pose ignite the flash powder. W. MARSHALL.

Negative by D. C. Reusch, Springfield, Mass.

STUDY OF A CHILD.

TWO LITTLE DEVICES.

Of all the ills to which photographic chemicals are subject, the most stealthy and difficult to guard against, in my opinion, is oxidation by contact with the air. Solutions are especially liable to such action, and one of the most susceptible is the pyro-developer stock solution, which should be kept clear and pure above all things. The simplest plan for preserving such solutions is to pour over them a thin layer of oil, such as kerosene, which will not affect the liquid, while sealing it perfectly from the air by floating on its surface. The following device, an adaptation of the chemist's washing-bottle, solves the problem of drawing off the stock from underneath the oil. The materials needed are: A bottle (large enough to hold the stock solution), a sound cork to fit, a foot of small rubber tubing and about two feet of glass tubing ⅛ inch in diameter. Bore two holes lengthwise through the cork to admit the tubing, making an air-tight fit. This can best be done with a hot iron wire. Next cut and bend the glass tubing as shown in Fig. 1. The long arm of the piece (A) passes through the cork (C), reaching to within ⅛ inch of the bottom of the bottle. The horizontal arm is 2 inches long, with an oblique nozzle 1 inch long, bent at the angle shown. The short piece of tubing (B) only reaches to the under face of the cork, with a short horizontal arm to receive the rubber tubing (D). In bending the glass tubing, twirl it slowly in the flame of an alcohol lamp, until it yields gradually to gentle pressure. To cut the tubing, make a slight file-mark at the point desired before attempting to break it. Next thrust the two tubes through the cork and slip on the rubber hose. Now put your stock solution in the bottle, slip the lower end of the long tube down the bottle-neck and under the surface of the liquid, pour in a quarter-inch layer of oil and push in the cork. Observe this order, so as to keep the oil out of the longer tube. Now, when you blow into the rubber tubing, the pressure forces a stream of liquid out of the long tube, under which you hold the graduate, the whole apparatus being raised to a level with the eye in order to read the scale accurately. The diameter of tube A is so small that the air does not affect the stock, and so the last dram is as good as the first, no matter how long kept.

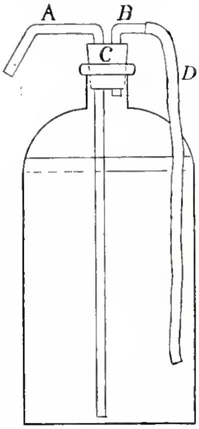


FIG. 1.

The second contrivance is a flash-lamp. No one who has tried fuses and matches to ignite flash-powder need be reminded of the perversity of that compound. Fig. 2 represents a home-made lamp in which the powder is fired by a blow-pipe, whose intense heat ignites it instantly. Most of the dimensions are given in the drawing, but a few explanations are in order. The block A is ¾ inch thick and the rectangular notch holding the bit of candle (E) should just hold it snugly. The base (D), to which A is nailed, is 6 by 2½ inches. Now, tack on A a tin pan (B) to hold the powder, about 2 inches in diameter and ¼ inch deep (a can cover will be good). Next, file off the spout of a small, cheap oil can, for a nozzle (C). This is to be fastened with two staples on top of block A as shown, and fixed at such an angle that the jet of air from it will strike the middle of the pan opposite. A bit of tin must be cut out of the side of the pan, just opposite the nozzle, to admit the jet of flame to the powder. Now

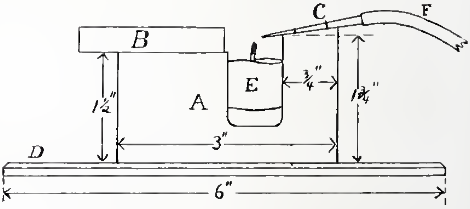


FIG. 2.

slip on C the end of a piece of rubber tubing 3 feet long (F), and the lamp is complete. The perspective view (Fig. 3) will clear up any difficulties. To use, adjust the candle in its slot so that the wick and nozzle of the pipe have the relative positions shown in the diagram, then pile up the powder — about a dram for an ordinary room — and light the wick just before making the exposure. This lamp can safely be held over the head at arm's length. The best point about it is the control that it gives the photographer over the instant of exposure, for a flash will respond instantly to a light, steady blowing into the tube.

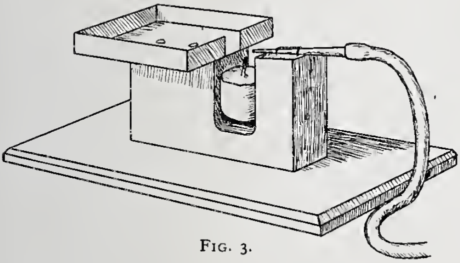


Fig. 3.

R. W. Hilts.

HOME-MADE APPLIANCES.

Many amateur photographers can not afford the expense of having all the appliances for taking and finishing pictures, and to others it would seem a waste of money to have all the conveniences of a well-equipped studio for the few pictures they take, and consequently with a great deal of pains and patience they sometimes get good prints. Of course no mechanic, no matter how proficient he may be, can do good work without the necessary tools, and photographers' appliances (or tools) are usually expensive, especially to the amateur who only takes an occasional picture, so he usually has as few as he can possibly get along with, and falls back on the kitchen utensils to help him

Negative by Ira A. Eberhart, Chicago Lawn, Ill.

SPRINGTIME.

(Second Prize.)

out. I have been using the following home-made appliances for some time, and find them both practical and inexpensive :

Negative by James E. Taggart, Lewis Center, Ohio.

IN PLEASANT MOOD.

I live in the country, and, of course, have no running water in the house, so I went to the grocer's and bought an empty butter firkin for 10 cents, and a small wooden tap for the same price. Cleaning the tub out well, and soaking it for a few days so as to remove all trace of salt, I put in the tap about one inch from the bottom. Any sediment in the water will sink below the level of the tap, and will not get on your prints or plates when washing. This, set on a box or table with an ordinary washtub under the tap, makes an excellent substitute for running water in the house.

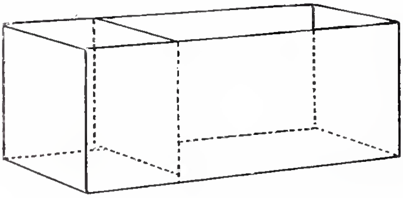


Fig. 1.

To wash negatives, I have an ordinary box a few inches longer than the plates, and deep enough to hold enough water to cover plates when standing on edge, made in two compartments, with a small space under the partition to allow water to pass freely from one part to the other. All other seams I sealed with paraffin to make them water-tight. For the larger compartment I made a negative rack, as follows : I took two strips of wood about two inches in width and long enough to fit lengthwise in the compartment, and fitted together at the top of each end the desired distance apart. I then took an old tomato can and cut two narrow strips out of it, into which I cut slits ¼-inch deep and ½-inch apart. The ends are now bent over (and hammered down) so as to make a serrated edge. The first part of Fig. 2 shows the serrated edge, the latter where the slits are cut ready to be bent over. I then fastened the tin to the top strips with the notches facing each other, and a small strip to hold the bottom together, with notches cut in the top of it to correspond with the notches in the ends, and fastened to the bottom of the washing box. This frame will hold the negatives in position while washing without any danger of scratching the film. To wash negatives I put the washing box under the tap so that the water will run into the small compartment, and from there through the

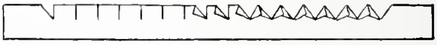


Fig. 2.

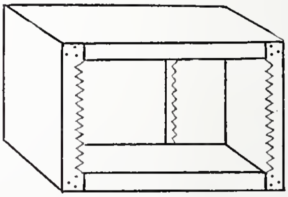


Fig. 3.

space under the partition into the larger one, washing the plates thoroughly from bottom to top.

To mount squeegee prints, I cut a piece of cardboard ½-inch smaller than the print when trimmed. I lay this on the card mount, and rule along the edge with a soft lead-pencil. I then apply the paste to the mount inside of the ruled lines. I then put the print, face down, on a piece of glass, and lay ruling card on the back of it so as to leave ¼-inch margin all around the print. I then gum the margin and transfer the print to the mount. In this way the print will lose none of its luster, and there is no danger of not getting it on straight if done carefully.

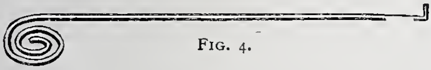


FIG. 4.

I have had considerable trouble in getting dry plates out of the holder, often breaking my nails and scratching the film, especially when the holders were new, and the springs worked hard. To overcome this I took a wire hairpin, straightened it out and hammered one end flat. I then bent this end over so as to make a small, flat hook, to fit the thickness of a plate; the other end I curled over so as to make a handle for it, as in Fig. 4. With this the plates can easily be removed without any danger of scratching the film or breaking the nails.

J. C. EBY.

INFORMATION WANTED.

PLEASANT UNITY, PA.,
March 22, 1900.

DEAR SIR,—In this smoky atmosphere of western Pennsylvania a matt surface print if exposed for a short time on a card is spoiled. How am I to protect platinotype prints that I do not want put in an album or under glass? Could a thin coat of gelatin or some sort of varnish be spread over them without injuring them or spoiling the matt effect? If any of THE PHOTO-BEACON readers have worked out a successful plan for protecting these delicate-surfaced prints from dust and smoke I should like to hear from them through the magazine.

Yours truly,
R. F. SMITH.

TRADE NOTES.

FROM George H. Paltridge, instructor in photography, Lewis Institute, Chicago, we have received a copy of a new book entitled "Photographic Instruction Test." This is a very practical book and should be a good guide to beginners in the art. Price, $1.25, cloth.

THE Appert Glass Company, 135 Broadway, New York, send us a sample of a glass-washing and fixing bath they have just brought out. It is adapted for plates from 4 by 5 to 8 by 10 in size. Price, complete, $3. It is a good, workable, clean utensil and should be popular.

BURKE & JAMES, 109-111 Wabash avenue, Chicago, favor us with a copy of their 1900 catalogue. The "Ideal" specialties which they manufacture are well known and appreciated, and the purpose of this book is to tell all about them. In addition it contains particulars of almost everything that the average amateur is interested in. A copy can be had for a postal and it will be found a mighty handy book of reference by most people.

IN our advertising columns will be found the advertisement of the Eclipse Photo-paper Company. This concern is organized by Mr. E. A. Gilbert, who has for many years been well known as the manufacturer of the "Eclipse" printing-out papers. Mr. Gilbert, by the introduction of new capital into his business, has been enabled to considerably enlarge his factory and consequently to easily fill the increased demand for his papers. "Electro" is the title of a new developing paper which the company is introducing and which we feel certain will be as popular as "Eclipse" has been in the past.

ALL amateur photographers who are interested in nature, and all should be, will appreciate "Bird Studies With a Camera," by Frank M. Chapman. We sat down to it one evening and had to finish it before going to bed. One of our boys is a devoted lover of nature and nature's works, and is the possessor of rather a good library on birds, flowers, trees, butterflies, etc., and he reports the book as "just fine." The photographs of the birds on their nests and alongside of them are excellent, and ought to arouse new desires in the breasts of amateurs. Here is a new world to conquer, and a better way of shooting birds than with a gun. Published by D. Appleton & Co. Price, $1.75.

Home Hobbies, Arts and Crafts

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CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER.

INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

CARE OF TOOLS.

There are three important things necessary for a successful woodworker — good tools, knowing how to use them, and knowing how to care for them. To this last we feel that a chapter should be devoted, so that the novice can go in the right direction. As in all things else, there is a right and a wrong way — a use and an abuse of tools. If we use them rightly, and care for them properly, we are sure of results adequate to our ability.

The tools we shall use the most often, and will have to care for most, will be the chisel and the plane cutter. The saws will become dull less frequently, and as that is a tool that most naturally the amateur would take to a professional filer, we will not speak of filing saws at present for two reasons — first, it is a very difficult tool to sharpen, so difficult that very few woodworkers attempt to keep their own in condition, largely because they have never studied the principle of the action of the saw; second, on a fine cross cut, or back saw, sharpening is very trying on the eyes. The professional filer does his work almost by touch, rather than by sight, holding his file at the right angle, as the result of years of practice. In the hands of the novice it is a hard thing, and we have seen too many good saws almost ruined by persons who did not know how to properly file one, to recommend that every amateur should try it. We appreciate the fact that it is a very good thing to know how to sharpen one's own saws, and later on may devote a chapter to that.

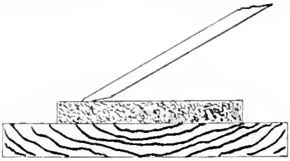

FIG. 1.

When we have worked a chisel or plane cutter for some time, it becomes dull, and will not cut well. Let us examine the cutting edge. It is a bright shining edge now. Before it was dull it was quite invisible. If we test it with the end of the finger, instead of feeling keen and catching to the skin, it is smooth and rounded. If we should look at it under a magnifying glass it would look like Fig. 3.

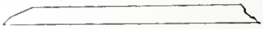

FIG. 2.

We will assume that the chisel or plane cutter has no nicks in it, and only needs sharpening or *whetting* on our India oil stone. First, we must moisten the stone with a few drops of oil. Hold the tool in the position shown in Fig. 1, and move it backward and forward the length of the stone. The angle of thirty to thirty-five degrees must be maintained in order to insure a cutting edge, and have our tool like Fig. 2.

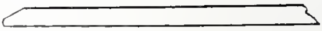

FIG. 3.

In pushing the cutter forward and backward on the stone, it is most important that no rocking motion or *teetering* of our hands and cutter be indulged in, or we will get an edge that looks like Fig. 3.

After the stone has worn the steel down to the edge, if we examine it closely we will very likely find a wire edge caused by the grinding. Fig. 4 shows this in an exaggerated form. This must be removed before we can get a cutting edge on our tools. In sharpening tools it is not necessary to make the wire edge if we have taken proper care of the tools, and sharpened them often. It is only when they are nicked or have been used a long time without whetting that we are obliged to grind away so much. For all whetting or sharpening is grinding away part of the steel that our tools are made of.

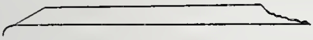

FIG. 4.

To remove this wire edge, place the chisel on the stone with the *bevel up*. (Fig. 5.) Be sure that it is perfectly flat on the stone before beginning to grind. The motion for this may be forward and back, the length of the stone, or it may be a circular motion. Often we can help remove this wire edge by drawing the edge of the tool across a piece of scrap wood. With sharpening tools, as with many other things in woodwork, "practice makes perfect." It is far better to take a few minutes each time we wish to use our tools and give them a few rubs over the oil stone than to leave them until they get very dull and do not do good work for us. Our tools are good helpers or poor ones, just as we treat them.

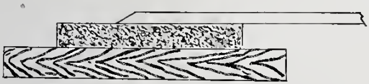

FIG. 5.

We could insert a number of "Don'ts" that would be helpful. For instance, don't put the plane flat on the bench, lay it on its side. That keeps the cutter from coming in contact with dirt and grit that would make it dull very quickly. Don't get into the habit of tapping or picking the top of the bench with the chisel or knife. It spoils both bench and tools. We have noticed that it is a habit with many young woodworkers. Don't take both hands to push the saw. If it is in condition it will almost "run itself."

USE OF THE HAMMER.

Hammers are made in various sizes, from a fraction of an ounce to about thirty pounds, to meet the various requirements of work and tastes of workmen. The bench woodworker usually employs a claw hammer weighing fourteen to sixteen ounces. The head is wholly of steel. The striking face is slightly rounded to prevent marring the work, and hardened so as not to be injured by repeated blows upon the nail, which is comparatively soft. The handle is made of wood, to give balance and increase the effective force of the blows.

A great deal might be said regarding the manner of holding the hammer and the kind of strokes most effective upon the work. The handle should be held well back toward the end and firmly between the thumb and forefinger, the finger extending around the handle. The remaining three fingers are to extend around the handle also, but are to grasp the handle loosely. A light stroke, or the first part of a heavy stroke, is made by raising the hammer head by opening or extending the last three fingers and keeping the wrist as motionless as possible (Fig. 6) and allowing the hammer to fall of its own weight, assisted only very slightly by the last three fingers (Fig. 7). The idea is to use the weight of the hammer instead of the muscles.

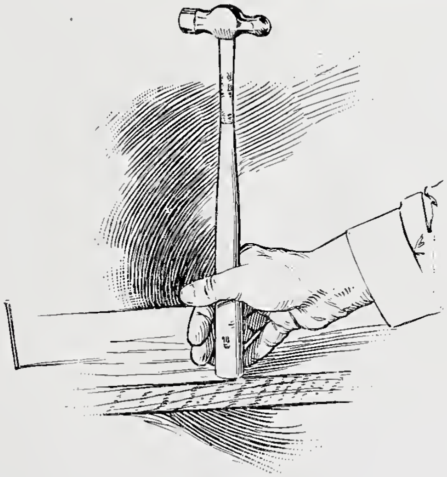

FIG. 6.

To strike a little harder blow, use the same stroke exactly, but assist with a more powerful pull of the last three fingers, still keeping the wrist as still as possible. This will enable one to "throw" the head of the hammer down without using any force except with the fingers. The next stroke should combine with this a wrist motion which will allow the hammer head to be raised farther back and a more powerful "throw" thereby obtained (Fig. 8). Next we might add to this a motion of the forearm, and "throw" it with still greater force. Again, for a very heavy blow the whole arm may be brought into play and the hammer "thrown in" by all the force of fingers, wrist, forearm and shoulder. No more powerful blow could be made excepting the handle be longer or the head heavier. Fig. 9 shows how a hammer should *not* be held.

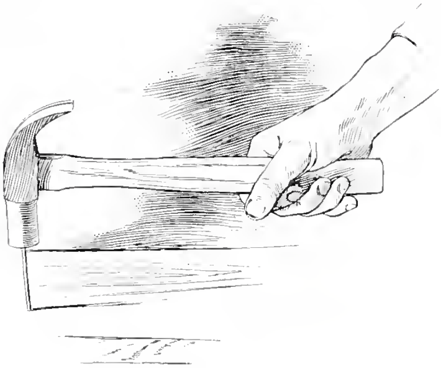

Fig. 7.

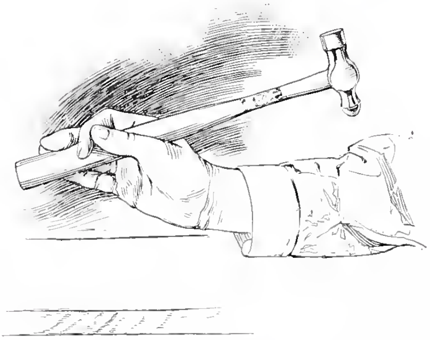

Fig. 8.

Strike two or three light blows upon a block of wood, taking care that the striking face of the hammer is parallel with the surface of the block, and examine the marks or impressions. They should show a whole circle, and if only a portion of the circle appears the hammer is not held correctly. Strike several heavy blows and note the result. It is a common fault for the beginner to allow the head to incline slightly to the side, which is almost sure to bend the nail or slide off and hit the fingers or mar the work, and indicates that the handle must be held more firmly in the hand. There is a certain value, also, in assisting the rebound of the hammer, which is done by stopping and withdrawing the tool the instant the objective point is reached — a similar motion to the cracking of a whip. This will give delicacy to the most powerful stroke.

No matter how skilfully the hammer is used, if the work is not held firmly and solidly the effective force of the blow is lost. There is, therefore, as much or more value in a solid, firm bench or foundation for the work as in the stroke of the hammer. For example, hold a piece of board in the left hand and try to drive a nail in it; put a heavy object behind the board (a block of iron or a hatchet) and note the difference. Now place the board on a solid bench and it will readily be seen that the bench is as important as the hammer.

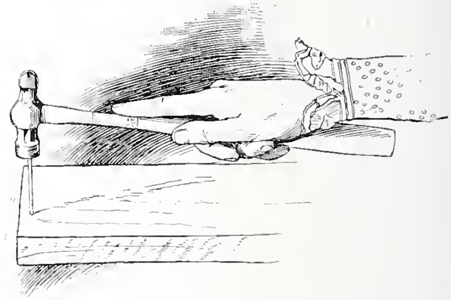

Fig. 9.

Some poor workmen have undertaken to make a nailset out of an old file and have utterly ruined their hammers, because the file is much harder than the hammer and the softer metal must yield, so an impression is made in the hammer by every stroke. A nail is softer than the hammer and therefore makes no impression upon it. It would be all right to use the old file if the temper is taken out of the upper end.

The claw is very useful for withdrawing or pulling out nails that have been driven wrongly, or that may have bent by faulty handling of the hammer. It is V-shaped on the inside, so as to take a powerful hold of the nail. Care must be taken not to allow the head to injure the wood, and it is always advisable to place a block of wood under the head of the hammer, and not allow the hard metal to come in contact with the work. (See Fig. 10.) This has the additional advantage of increasing the leverage, and also to enable one to pull a nail out without bending it if the block be changed to a thicker one when the nail is partly out.

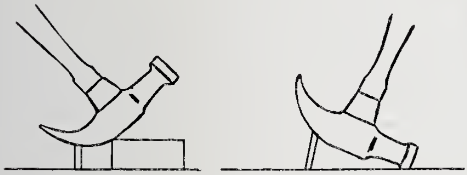

Fig. 10.

Sometimes a nail which has been started too slantingwise may be brought up straight again by a drawing motion of the hammer (Fig. 11), and this is a common practice in laying floor boards in order to pull the joint closer. It is also used to "clinch" a nail which projects through the work. The first tap should be drawn in the manner shown, and will bend the point of the nail only slightly, the next tap will bend it more, and a heavy blow delivered straight on the nail will bend it so as to compress the whole end of the nail below the surface of the wood.

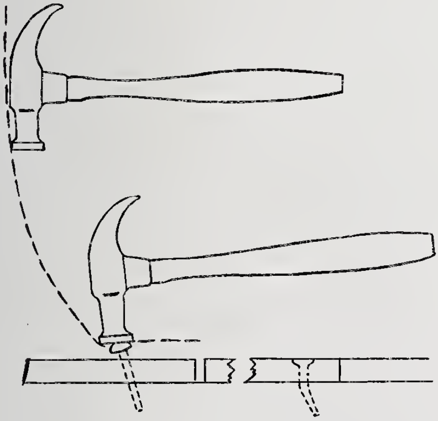

Fig. 11.

One thing more about a hammer, and that is a "Don't." Don't ever strike a chisel handle with a metal hammer, no matter how strong the temptation may be, as the chisel handle is sure to suffer by it, and next time the hand is used to force the chisel, the hand will suffer also. The action of a hammer is very sudden and very direct, and the entire force is spent all at once, so that the very end of the chisel handle takes most of it, and the result is that it is damaged by the sudden compressing force so that it becomes flattened and spreads out after a while like the head of a rivet, because the repeated or hard blows break the fibers of the wood. The action is so sudden that a very small proportion of the force is transmitted through the chisel to the cutting edge. This is why the mallet or wooden hammer is used for this purpose. Its action is slower, and therefore more gradual. The whole force remains stored for an instant in the mallet, and is given out or transmitted to the chisel more in the form of a push than a blow. The action of the two tools is as different as powder is from nitro-glycerine in a gun-barrel. Every one knows that the real power which pushes a bullet out of its cartridge is the gas formed by the burning of the powder. Compared with nitro-glycerine, powder burns slowly, and by the time the powder is all burned, the gas has increased its bulk about 100 times, and something must move to make room for it all; so the bullet starts to move the instant the gas starts to form, and increases its speed as the gas increases, until by the time it reaches the muzzle of the gun it has gained force enough to carry it a mile or so. The action of nitro-glycerine is different, in that the gas increases the bulk to about 1,000 times, and so suddenly that before the bullet has time to start, the back end of the gun is all blown to pieces.

This illustration may seem far-fetched, but it may serve to show that the mallet, which is more like the action of powder, will drive a chisel deeper into wood with the same force behind it, than the hammer, and that without marring the handle.

EDITORIAL TABLE.

Ralph J. Golsen, 80 Wabash avenue, Chicago, favors us with a copy of his new bargain list. It is No. 13, but judging by the contents it will not be by any means unlucky for the individual who wishes to get good goods at moderate prices. It will be sent free on receipt of postal.

Tennant & Ward, 289 Fourth avenue, New York city, announce that the demand for the Photo-Miniature Series has compelled them to run a third edition of "Modern Lenses" and "The Pose in Portraiture," and a second edition of "Orthochromatic Photography." Price 25 cents each.

"Hawkeyes" is the title of the catalogue issued by The Blair Camera Company, Rochester, New York, descriptive of their goods for 1900. In its pages will be found full particulars of the Weno and Hawk-eye cameras, tripods, lanterns, trays, films, printing papers, etc., manufactured by the company.

The Gundlach Optical Company, Rochester, New York, favor us with a copy of their 1900 catalogue. In it will be found full particulars of the Korona Camera (of which, by the way, there are many varieties), the Turner-Reich Anastigmat lens, the Rectigraphic and Rengraphic lenses, and the Korona shutters, all manufactured by the company. In addition are tripods, printing frames, lamps, etc.

U. Nehring, 16 East Forty-second street, New York city, has just issued a catalogue of his new lenses. We opened it expecting it to be occupied with particulars of his ampliscope series, but were agreeably surprised to find that he has gone into the manufacturing of anastigmats and tele-photo lenses, all of which he guarantees equal to the best. The prices are certainly very reasonable. The catalogue can be had for the asking.

"Cyclone and Western Magazine Cameras" is the title of a small catalogue forwarded to us by the Rochester Optical and Camera Company, Rochester, New York. As its name implies, it tells all about the makes of magazine cameras manufactured by this firm. We fancy these instruments are well known to most of our readers who are aware of their wonderful simplicity. One of them lies loaded ready for business all the time in our own home, and the young folks get out and use it whenever they feel like it, and it is simply surprising how good are many of their results. The booklet is worth having, and so is the camera.

From **Andrew J. Lloyd & Co.,** Boston, comes the second year's issue of "Lloyd's Photographic Encyclopedia," which consists, in the first place, of the most complete catalogue in this country of goods on the photographic market; in the second place, of five articles on certain phases of photography by as many photographic editors, two being English and three American; and in the third place, of reference tables and formulæ. The 20 cents charged for it pays the cost of mailing; the book itself is practically given away. But it is worth getting, and we advise our readers to send the 20 cents and get a copy.

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL,
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of THE PHOTO-BEACON COMPANY.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

Accepted literary articles will be paid for upon publication.

Secretaries of photographic societies are requested to favor with brief reports of their meetings.

Subscribers advertising secondhand apparatus for sale or exchange, special articles wanted, help or situations wanted, *one insertion free.*

To insure insertion in any particular number, copy for advertisements must be received not later than the 20th of the month preceding.

All communications relating to THE PHOTO-BEACON should be addressed to

THE PHOTO-BEACON COMPANY,

TRIBUNE BUILDING,
CHICAGO, ILLINOIS.
Eastern Office: 80 Wall Street, New York.

Negative by W. F. Willis, Chicago.

Around the turn are kings and queens.
Around the turn are dogs and cats.
Around the turn are peas and beans
And handsome light blue derby hats.

Around the turn are grizzly bears.
Around the turn are hills and dales.
Around the turn are mice and hares
And cream and milk in wooden pails.

Indeed you'll find there horses, pigs.
Great seas and cities you'll discern—
All things, in fact, including figs,
For all the world lies 'round the turn.

JOHN KENDRICK BANGS.

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. AUGUST, 1900. No. 8.

AN IMPORTED EPIDEMIC.

Were any practical good to be gained thereby we would be tempted to print extracts from the hundreds of letters that have reached us commenting on our criticisms in the June PHOTO-BEACON. Outside of the select few who are behind the movement the letters are more than flattering.

But after all has been said and done there is nothing specially new about this craze. It affected men's brains in Great Britain a number of years ago, and just as they are getting over it the epidemic breaks out here. It is a good deal like la grippe — you never can tell how it will hit a man, how severe an attack he will have, and what after troubles it may leave behind. Some get over it easily; others bear the marks for the balance of their shortened career.

The following extract from the *British Journal of Photography* indicates what the British opinion is of the craze, now that the photographers there have experienced it:

> Some of the American photographic publications supply funny reading matter just now. It is all over pictorial photography. A few ladies and gentlemen in New York are industriously booming themselves and their work, which may best be described as of that kind which a professional photographer would consign to his waste tub, while the public and the common-sense critics would not have it at any price. These self-deluded, if well-meaning, people claim the leadership of pictorial photography in America, on the grounds of the unrecognizable smudginess of their work and the slobbery, stuff, styled "appreciations," that is written about it. But Boston warmly disputes the claim of New York to take the lead in pictorial photography, and Chicago is equally emphatic on the same subject. There are already some half-dozen rival "Salons" in the United States, and at Pittsburg, recently, a show of photographs was divided off into a "Salon" and a mere "Exhibition of photographs"! Probably not one British photographer in a thousand sees the American publications or the photography of the very newest pictorial kind which they largely illustrate. It is best described as closely resembling the inscrutable nebulosities of landscape and portrait work which were shown here some five or six years ago. In the States it is called "freak" photography. Of course, the disease in this country wrought its own cure, and we have long since passed the stage when the visitor to a photographic exhibition only too frequently found himself in a condition of despairing doubt as to what some of the productions on the walls were supposed to be, photographs or not. We know now where we are in these matters, and, when some of our American brethren begin to realize that a pictorial photograph is not necessarily an exceedingly bad one in every single respect in which camera work should excel, there will be a return to a saner state of things. Many of the recent illustrations in *Camera Notes,* the *Photo-Era,* the Chicago PHOTO-BEACON'S Salon number, and the Pittsburg *Catalogue* clearly shows that the originals must be painfully poor things indeed, judged from any critical standpoint, artistic or photographic.

Speaking of our souvenir, Mr. John A. Hodges writes:

"I offer you my sincere congratulations on the appearance and get up of this special issue. It lies on my 'best' drawing-room table. You have done well so far as your part is concerned, but I confess much of the work illustrated does not appeal to me. A few years back a great deal of the same sort of thing was exhibited here (London), but now, I am thankful to say, one seldom sees it. I was glad to read your outspoken criticisms, and I hope it will have a salutary effect on the producers of these 'art' photographs. A good many people seem to think that by adopting one or two tricky methods of working any photograph may be passed off as a work of art."

PICTORIAL COMPETITION No. 26.

Only four entries were received in this competition, which goes to show that the average amateur either does not appreciate how much he can improve an overdeveloped negative by reducing it, or that he is too lazy to perform the operation.

The prizes were awarded as follows:

First Prize—Arthur W. Wilde, 141 East Washington lane, Germantown, Philadelphia, Pennsylvania.

Second Prize—W. A. T. Sneatman, 539 Balmoral street, Winnipeg, Canada.

Third Prize—N. J. Melville, 724 Crescent street, Astoria, Long Island, New York.

Mr. Wilde and Mr. Melville used the well-known Farmer's solution, while Mr. Sneatman employed ammonium persulphate, all using the formulæ given in Part II of the "Reference Book of Practical Photography." The value of the latter in reducing excessive contrasts is strikingly shown in Mr. Sneatman's prints.

PICTORIAL COMPETITIONS FOR 1900.

Competition No. 28.—"At Home" portraiture. Closes August 31.

Competition No. 29.—Genre pictures, or pictures that tell a story. Closes September 30.

Competition No. 30.— Snap-shot pictures. Closes October 31.

Competition No. 31.— Landscapes. Closes November 30.

Competition No. 32.— Ray-filter pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given, also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

PRIZES.

First.— Books to the value of $5.
Second.—Books to the value of $2.50.
Third.— Books to the value of $1.
To be selected from our catalogue.

THE KODAK DISPLAY AT THE PARIS EXHIBITION.

Visitors to the Paris Exhibition will undoubtedly be interested in the American manufacturers' displays. We would remind them that the kodak exhibit is situated in the Palace of Education, Champs de Mars, near the Eiffel Tower and the Avenue De Suffren, ground floor, United States section, group III, class XII.

Negative by Frank E. Foster, Iowa Falls, Iowa.

THE CONVALESCENT.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F.R.P.S.

CHAPTER VII.

CONTROL.

I am fully aware, in approaching this part of the subject, that I am getting upon very debatable ground, and dealing with a topic upon which very diverse opinions are held, and one which, whenever raised, usually provokes a more or less acrimonious discussion. It is just this result, however, that I would endeavor to avoid, for no possible good and probably much harm is the direct outcome of such discussion, which, after all said and done, generally leaves the matter discussed in the same position as before.

Whether it is legitimate to resort to methods of control which are not of a strictly photographic character or not is an ethical question which I must leave every reader to determine for himself. At present the limitations and restrictions of the photographic process are sometimes such that *some control,* whether photographic or otherwise I do not for the moment pause to consider, would appear to be essential in order to produce a truly artistic result. And even if our photographic methods of reproduction had reached to a far greater degree of perfection than is actually the case, very seldom, indeed, do we find in nature a subject so perfect both in composition and in chiaroscuro as not to be susceptible of any further improvement.

While I am no advocate of brush photography, or the productions of that hybrid type of photograph which challenges the question: "Is it a painting or a photograph?" I do, nevertheless, hold that it is both legitimate and proper to resort to any method of control that will tend to the production of a more artistic or truthful realization of the particular phase of nature which it is intended to represent.

Artistic photography, from the point of view of pure photography, is well-nigh an impossibility, for, as I have said, we can not find our pictures ready-made in the open. Nature, in short, with all its marvelous wealth of beauty, is not necessarily artistic, in the artist's sense. There are but few scenes presented to us by nature that a skilled painter would not find it necessary to control, modify or alter in some respect or other in transferring them to his canvas. How much greater, then, the necessity for the exercise of control in the case of photography, the tendency of which is to give undue prominence to minor details, to exaggerate contrast, and to give an untrue rendering of color values. It is true that by the due exercise of skill all these tendencies may to a large extent be kept in subjection, but the inherent disabilities of the process remain, and, I think, were one to shut one's eyes to the fact that by adopting certain procedure some of these difficulties may be overcome, and refuse to avail ourselves of them, we should only be emulating the example of the proverbial camel.

I would, however, at the outset impress upon my reader two things: Firstly, whenever possible to avoid all semblance of "faking" and endeavor to see how near to your ideal realization of the subject nature and unaided photography will allow you to get.

Secondly, I wish them to appreciate that the successful employment of controlling effect is exceedingly difficult of attainment, and demands not only the possession of the true artistic temperament and instinct to appreciate what is necessary to be done in the way of improvement, but also a high degree of technical skill to successfully carry it out.

I can not too strongly condemn the growing tendency to "improve" photographs by the direct application of brush work to the print. Fortunately for artistic photography this method usually defeats its own object, and leaves the subject treated far worse than it was originally, and produces a result which is anything but a work of art. Apart from all question of legitimacy such work is *bad art,* as, indeed, are all hybrid methods, and, therefore, should stand condemned upon that ground alone.

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*Copyright, 1900, by F. Dundas Todd.

This leads me to the true test of whether what is done is good, or the reverse. That test is *the result*. The question which the worker must always ask himself is: Does the method which has been adopted to secure the desired effect betray itself? If it does, then the work is a failure, for the greatest art lies in the concealment of the artifice, by which a particular result is attained—a trite saying, but one the truth of which is not open to question, and which is preëminently applicable to the present discussion.

When any working or retouching of the negative is attempted there is always the greatest danger of doing too much, and directly this stage is reached the method employed, whatever it may be, becomes obvious, and the result is failure. For this reason the simplest means are generally the more useful, and enable greater improvement to be effected than methods which are more elaborate.

Handwork, upon negative or transparency, must always be executed with the greatest of care, or its presence will at once be detected. We do not recommend or advise its employment to a greater degree than the strengthening of a principal light or the deepening of a shadow. The photograph that falls so far short of expressing the desired sentiment as to appear to need the elaborate application of stump or pencil, that is sometimes met with in many so-called artistic photographs, in our opinion should be regarded photographically as a failure, and be treated as such.

Whatever may be its artistic shortcomings in other directions, none can deny the marvelous delicacy of the photographic image, and in this respect brush or pen work is hopelessly outrivaled, however skilful its execution. The two methods are distinct, and can not be compared; how futile and hopeless, then, to attempt to combine them, as so many seem to be doing at the present time.

I would, by way of introduction to the more technical aspect of this question, suggest that in every case the reader should, before attempting to "improve" any negative, ask himself the question whenever the opportunity exists, whether he could not by making another exposure under possibly more favorable conditions, secure a negative that would yield a nearer approximation to the effect desired, and only attempt "improvement" when all other methods fail.

Now, the character of the negative is, of course, an all-important matter, and the photographer who aspires to be a picture-maker must throw aside some technical standards of perfection. A "foggy" negative, for instance, could hardly be held up as an example of good technic, yet on occasion its deliberate production and employment may be essential to the successful rendering of a particular effect.

The artistic worker can not set up for himself any ideal standard of perfection in regard to the quality of his negatives. For one purpose a thin, delicate negative may be necessary to enable him to reproduce a given effect, while to render some other and different phase of nature successfully a negative of an altogether different type will be required.

As a rule, particularly if after-treatment is to be resorted to, a thin negative will be found most useful and more amenable to "controlling" influence than one of a denser or stronger type. The most fruitful source of failure in attempting to secure pictorial results by means of photography is underexposure and a desire to secure a pretty-looking negative. In my own practice I habitually overexpose, and to this fact I attribute much of whatever success may have attended my efforts at pictorial work. It is difficult to describe the appearance of such a negative as that which I am now advocating the production of. No part of it — not even the deepest shadows — should be quite bare glass; a slight deposit seems essential to secure a true and luminous shadow-rendering. The high lights must not be too opaque, and a good test of their density is the behavior of the print during printing — if the high lights are of correct density the sensitive paper representing them should show plenty of detail and have sensibly discolored by the time the print is ready for removal from the frame.

I find that these qualities can be secured most easily by giving a generous exposure and developing with a weak developer. With regard to the latter, I always, except it be for experimental purposes, use pyro and ammonia, for not only does it give me more control, but it produces a negative of a character that I can not so readily obtain with other developers.

A negative of the type and produced in the manner which I have endeavored to describe will, if it does not give the effect in the print which is sought for, be found to be more amenable to after-treatment than one of the ordinary good technical kind.

The devices by which the printing quality of a negative may be altered or controlled are many, but exigencies of space will only permit us to refer to a few. As we have before said, *when, how and to what extent* they should be employed must in each case be left to the reader's judgment.

One of the greatest difficulties met with by the landscape photographer is *scattered lighting*. In monochrome work especially is it necessary to pay attention to the due emphasis of the principal light, and the subjugation of all secondary lights. The tendency of photography is to render the principal light and all secondary lights with equal force and intensity, a condition of things which necessarily tends to destroy that most important quality — breadth. A very good example of the kind of defect to which we refer is to be seen in the first of the two illustrations (Fig. 20) given in our last chapter. The light, it will be seen, is reflected with equal intensity from each tiny leaflet, producing a most irritating and displeasing effect. If we look at the next illustration we shall notice a marked improvement, the scattered lighting has been subdued, and due emphasis given to the principal light.

This defect may be dealt with both upon the negative and upon the print. The latter plan is perhaps the most satisfactory. The improvement is effected by "sunning down"; that is to say, printing is first carried to the desired extent upon the sensitive medium employed — and it will be obviously easier to work upon a print-out paper than upon one that requires to be developed — and then, while the high lights are suitably screened, the rest of the print is subjected to the action of light, or "sunned" down. The method is one that requires to be used with care, as an untruthful result may very easily be produced, for the shadows and half-tones are deepened in the same ratio as the high lights, and the general tonality of the print may be spoiled. In practice the print is taken from the frame and laid face upward upon a drawing-board, a piece of clean glass being superimposed. A handful of cotton wool is then taken and lightly pulled out until it roughly masks the principal light, and those portions of the picture upon which further light action is not required. The print is then exposed to bright diffused daylight until the desired amount of lowering of tone has been produced. Some considerable care and skill is necessary to determine how far the action should be allowed to proceed, and it will be necessary to constantly examine the print, and also to alter the outline of the masking material from time to time in order to blend the shaded portion imperceptibly into the unshaded portion of the print.

When the nature and rendering of the subject demands that the outline of the portion or portions of the print which are to be protected from further light action must be carefully preserved, I take a trial print upon silver paper, and cut out the desired portions, and, after sticking them upon thin card, I use them as masks, laying them over the corresponding portions of the controlled print, and, if necessary, softening their edges with a thin tuft of cotton wool glued on. In this way high lights on water, rock or ice may be preserved and accentuated, while the surrounding parts of the picture are toned down.

Again another method of procedure is to cover the whole print with a sheet of thick brown paper, and by lifting up a corner slowly and letting it fall back, a corner or any marginal portion of the print may be toned down to any desired extent; or it may be useful in some cases to cut out a strip of the paper to form a flap, which may be lifted up and allowed to fall back in the same way in order to tone down, for instance, a portion of a large expanse of watery foreground. All these are very old devices, but possibly may not be so familiar to present-day workers as they are to those of the old school.

So far we have only been considering how to preserve certain existing light, while other portions of the picture are subdued or toned down. But we have also to deal with the converse case—namely, the actual strengthening of existing lights. Here the *modus operandi* is somewhat different, and more skill and artistic knowledge to avoid the production of an untrue effect will be demanded. When work of this kind is attempted it will in many cases be advisable to make a transparency from the negative, the latter being much easier to work upon than the negative image. For this reason the production of an enlarged negative from a transparency affords a ready means of effecting improvement in the direction we are now referring to. We may deepen the shadows of the enlarged transparency where necessary and subsequently strengthen the high lights upon the enlarged negative. We must, however, leave a description of this and other methods of control until next month.

Let me, however, in closing this chapter again impress upon my readers that, although I am describing various

Negative by H. W. Jordan (aged twelve), Alameda, Cal.

OLD AND YOUNG.

means of effecting "control," that such are only to be availed of as a last resource. Let your aim be always to see how near to the realization of your ideal nature and pure photography will take you, and if you fail, and then only, invoke such simple and straightforward aids as those to which I have called attention.

THE THEORY OF THE RAY-SCREEN.

The editor tells me he prefers that we give the practical side, the "how to do things," and we as amateurs should appreciate his efforts toward this end, for it is, after all, the process in active operation that yields us our results; it is the subjective side of action that determines the value of our product whether or not the why and wherefore is clear within us. Results undeviatingly follow stated conditions, and if you bring about those conditions there you have it. But to control the conditions intelligently— ah, there's the point. If we understand the causes, how much easier is it for us to govern them, and there is where theory comes to our relief. I have often reasoned in this fashion when I see amateurs wrestling with the problem of isochromatism, or orthochromatism, or "color values," or "true rendition," or whatever you choose to call it; and the implied doubt in some queries of the efficiency of color screens and iso plates impels me to cast my mite into the turmoil.

Firstly, white light or ordinary daylight is a homogeneous mixture of violet, blue, green, yellow and red light in such proportion that their *combined effect* is *white*. They act as a unit under most conditions and because they are so much in unison we find it difficult at first to accept the true status. But let us look through a chandelier spangle or the beveled edge of a plate-glass window; in a certain position we see a play of colors. There are the components of our daylight. Some of the colors have been retarded in passing through the prism, the white light is broken up and this gives us that delightful blend of color known as the solar spectrum. These elementary colors pass by gradation from violet through indigo and blue to green, then yellow, orange and red. Now, the primary colors have different properties and in this fact lies the trouble we encounter in photographing them. The chemical activity or actinic power that underlies the science of photography resides more predominently in the blue, indigo and violet rays, increasing in power toward violet, while the red is least active. Did you ever try to photograph a blue flower with a red or yellow one? Were you surprised to find the violet print out white while the rose or chrysanthemum came out dark? It is all because the blue object acted more powerfully on the plate, the impinge of light on the plate causing chemical action which is afterward "developed" or brought out by suitable means. The brightest part of the spectrum is in the yellow band, and hence it is that some use yellow or orange glass instead of red in their dark lanterns, securing a brighter illumination but with greater chance of fog because yellow is somewhat more actinic than red. As a matter of interest I may say that the red end of the spectrum is more active in heating property.

The surfaces of different objects are receptive to light to varying degrees. A black object is one that is receptive to all the color rays — they are all absorbed — while a white one is white because it reflects all the colors, and they come to us combined as an impression of white. A blue body absorbs all but the blue rays, which are reflected; and by reflection of two or more rays we get their combined effect. Now in photographing, say a landscape in autumn, which is a fertile illustration, we have the red and yellow of the leaves, green and brown grass, gray or brown trees, blue sky and water, variously colored flowers, and so on, with the whole gamut of color represented, each acting with a different energy upon the plate. When we get our print we find the soul of the picture subordinated to something which in the view is quite unnoticed and the effect sought is entirely defeated. In photographing paintings, flowers or birds the application is even closer, for coloring is governed in these cases by rules of which landscapes are quite independent. The question arises, How does the ray-filter help matters? Very simply. By shutting off the extreme activity of the green, blue, indigo and violet light, transmitting them with *its own* (yellow) *value*, while the red, orange and yellow are uninterrupted. In other words it is a rendition in monochrome—one color—i. e., the color of yellow. Theoretically, however, the correction is not absolute, for the yellow and red are not equalized; but for practical purposes the objection does not stand because of the extreme deficiency in actinism of the red. In some cases where there are great contrasts of color a deeper yellow is used which approaches nearer absolute orthochromatism but requires a longer exposure. Let us apply the ray screen to cloud photography. Ordinarily a clouded sky prints up white because, while exposing for terrestrial objects the highly actinic blue and white of the sky overexposes that portion and even dark clouds are blocked out entirely by halation and irradiation. Here again the yellow screen gives to the strongly lighted sky the value of yellow, retarding its action, while the dark clouds make their impression on the plate. The application of the principle to ortho plates is identical; only in this case the rays are equalized at the plate instead of at the lens.

And this is the phenomenon called iso—or orthochromatism.

It is far from difficult and has a widespread application extending to many branches of art and science. As photographers we meet it again in printing. Some negatives are of a yellow color, others greenish-yellow and blue, and I am sure you have all noticed the longer time necessary to print a yellow negative than a blue one. It explains why a yellow stain plays such havoc.

W. Lester MacFadden.

TRIMMING.

Of the hundreds of prints that reach the editor's desk in the course of a month it may safely be said that the vast majority need trimming. One and all seem to think that the size of the print is determined by the negative, but as a matter of fact it ought to be determined by the taste of the individual. As an object lesson we reproduce a very good landscape scene, sent by one of our readers, and along with it we give three engravings, which, we think, will show that contained in this large print there are a number of really good pictures. It would pay our readers to take four lots of cards and go over their work and see if many of their prints could not be cut down with advantage.

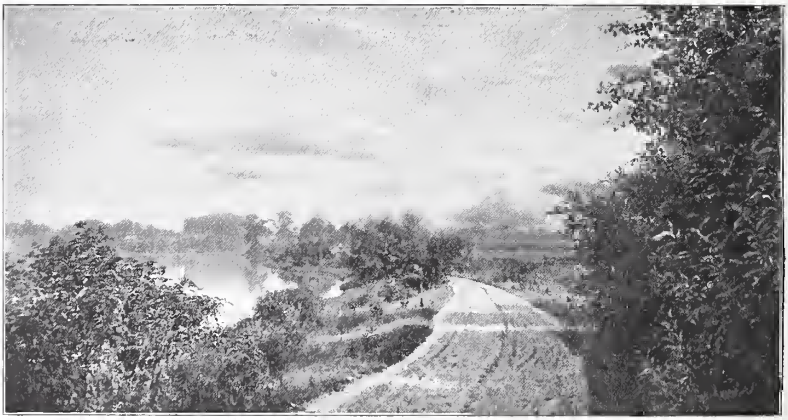


Fig. 1.

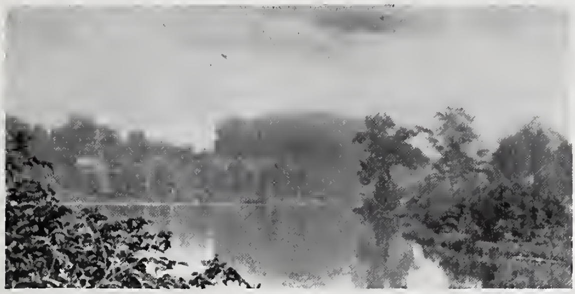


FIG. 2.

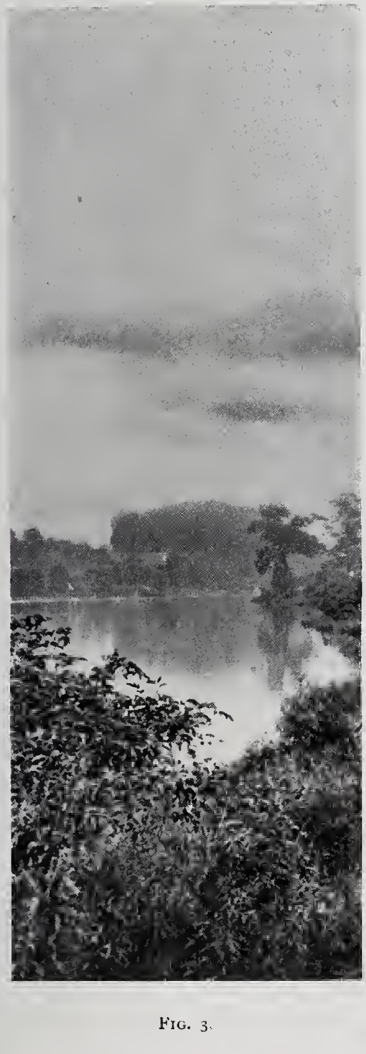


FIG. 3.

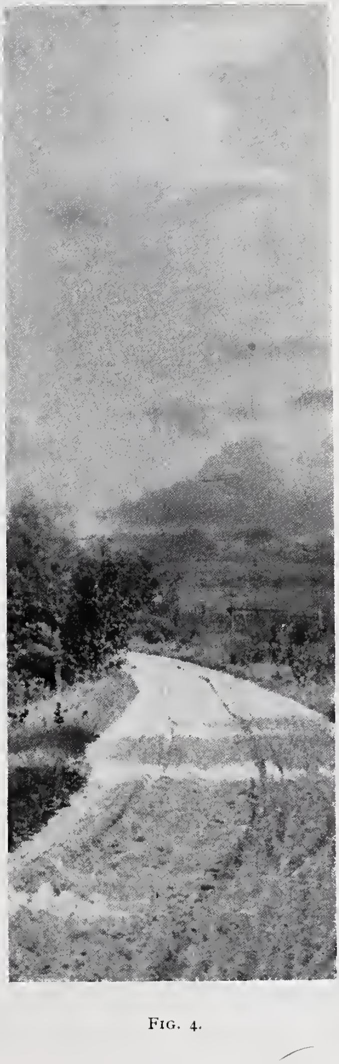


FIG. 4.

MARINE PHOTOGRAPHY.

There is perhaps no more interesting and fascinating work in the realm of photography than marine work. It matters not whether you are making wave studies on some rock-bound coast or looking for pictures on the Chicago river (and there are plenty to be had for the taking, even on that much-scoffed-at stream), there is always life and movement.

It is not the intention of this article to take up marine work in general, but only to deal with that part of it which applies to the photography of vessels in motion. To do this properly and with a fair expectation of making pictures requires care and a good deal more consideration and preparation than is generally imagined. A well-known professional, trying to discourage the writer in the attempt to take yachting pictures, said, "Even with all my experience, I exposed thirty-six 16 by 13 plates and only got two printable negatives," and certainly he was an expert; but since then I am inclined to think that a little more previous consideration and calculation would have resulted in thirty-four good negatives and two spoiled ones.

In this work it is not merely necessary to start, camera in hand, to the longest and busiest pier in sight and there prepare for action. By this method you will doubtless get photographs, but it is extremely doubtful about the pictures. The Micawber plan of "waiting for something to turn up" does not run to pictures. Vessels, or rather the steersmen, have seemingly an objection to sailing over just the desired spot — they either come too large or too small, and even when, by chance, you get one just where you want it, somebody comes along in a scow and spoils the whole thing.

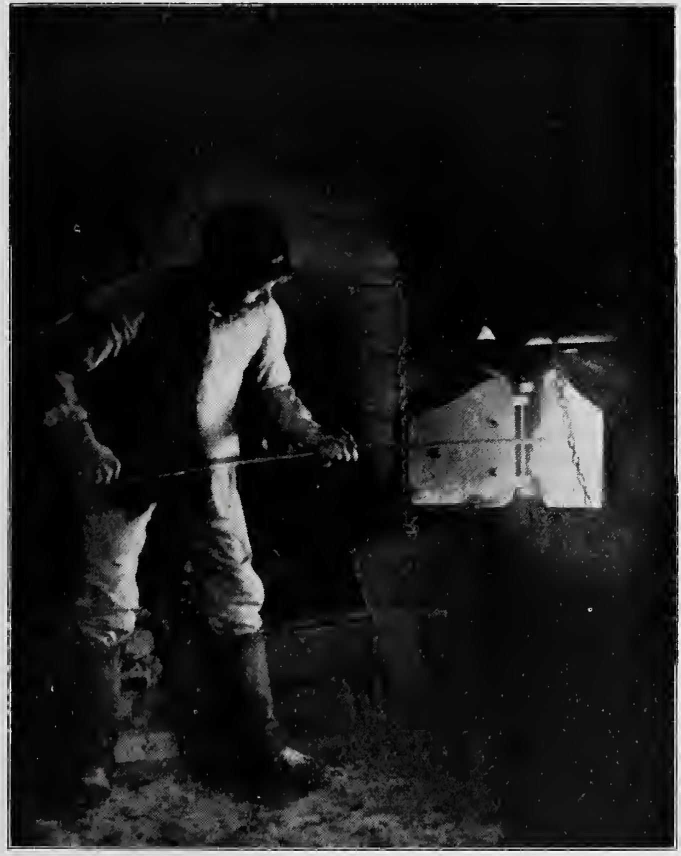
The first thing to be considered is the apparatus, and we will presume that something larger than a hand camera is to be used, for the reason that, although quite as good results can be had with such a camera as with a larger one, there is too much temptation, with the small size, to expose on everything that comes along, and this tends to carelessness and poor work. The camera should not be less than 10 by 8 and it may be as much bigger as the operator is inclined to have it. The plateholders must be beyond suspicion, as far as light-tightness is concerned, and there must be no flapping focusing cloth around. The shutter may be any of the fast-moving instruments of the day, without vibration, and not given to stick by reason of damp at some awkward moment. An accident of this kind befell the writer some years ago. He was using a camera 20 by 16, with a 30-inch focus single lens, and a shutter of the blind species in front of the lens. The object specially wanted to photograph was a training gun-brig when she came to anchor, her sails clewed up and all hands laying aloft to make the sails fast. With this object in view, that gun-brig was chased everywhere in a tugboat from 8 in the morning till 1 in the afternoon, and she came to anchor just as expected, and we were in a good position — dark slide drawn, focus right — but hard lines after all the trouble; when the exposure was made the shutter stuck in the middle and all the labor was undone. There was no other chance; things happen too quickly for that. If that shutter had been in the camera behind the lens this accident would not have happened, or even if it had not been kept set for so long a time it might not have happened, but the warning is to use a shutter which will not stick, or, using such a one, place it where the damp will not affect it.

A finder is absolutely necessary, and the most useful is one which gives on a fairly large scale a direct proportion of what is given on the large camera. The writer has used a 5 by 4 camera with a 7½-inch focus lens as a finder for a 20 by 16 camera with a 30-inch lens, the two having the same movements for raising and lowering the fronts. Focusing to scale is advisable, and the scale should be made up at home, any open view with marks set up at various distances, and the camera marked accordingly. The reason why this is the best plan is because when you are moving about on the water it is very difficult to find something steady enough to focus by, and after a little experience it becomes a comparatively easy matter to judge the correct focus by the distance of the object; and in all but the longest focus lenses the difference between long and short distances is not great.

As before mentioned, the focusing cloth must be left at home, but a covering of securely fastened waterproof is necessary to protect the camera from spray and damp.

Everything being so far ready, you have to consider by what method you are going to get in touch with your work. The best, probably, is a good, fast tugboat or steam yacht without much rigging. A small yacht is not of much use, as in case of heavy seas she is apt to rock too much. The writer prefers a good, strong tugboat, as there is plenty of room and no rigging to bother; and it may be said here that if the photographer has a fair knowledge of boat sailing he will have a much better chance of being successful than he otherwise would, as if the captain sees you have knowledge enough not to take any undue risks, he will go nearer and get into better positions than he otherwise would attempt to do.

Having decided upon the boat to carry you, set up your camera in such a position that no part of your boat can by any chance come into your picture



Negative by W. A. Berry, Manson, Iowa.

THE STOKER.

and then make for your object. We will assume your eye to be on a schooner running free with all sail set; there are plenty of strong clouds about; there are few occasions where the lack of clouds is admissible. Your aim must be to cut her off and get on her lee bow, as photographs taken to windward are seldom good. See your dark slide is out, your shutter bulb in hand. Now, watch through your finder till you get the size you want, snap your shutter and close up your plate, and turn out for something else. This watching for the right moment requires coolness and quickness, for if you miss the instant when the best effect is to be gained, you seldom have time to get another chance.

As mentioned above, it is seldom the want of clouds is admissible, but there is one case where it is so. If there is a dead calm, with somewhat of a haze in the sky, you will then get pretty effects from reflections, when actually the reflections come out stronger than the reality.

In photographing racing yachts, the photographer must be extremely careful not to get to windward of the yachts and spoil their wind; you will only get yourself hated and do no real good by getting to windward. The best place to get yachts is to leeward, and when they turn the mark-boat, but whoever has the camera and the boat can soon find out for himself where the pictures come. Don't be in a hurry. There "are other" days. Do as the writer has done — sailed for four days at a regatta without taking a picture, but on the fifth day taking twenty-four, which made up in quality if not in quantity for the four preceding days. W. H. H.

HOW TO TELL HOW TO DO IT.

To those who write to the PHOTO-BEACON a word of advice as to how they perform their work. How many chemical formulæ given in the annuals and periodicals are all they should be? About one in one hundred, and not more than three-fifths are worth the paper they are printed on, all because they are not complete.

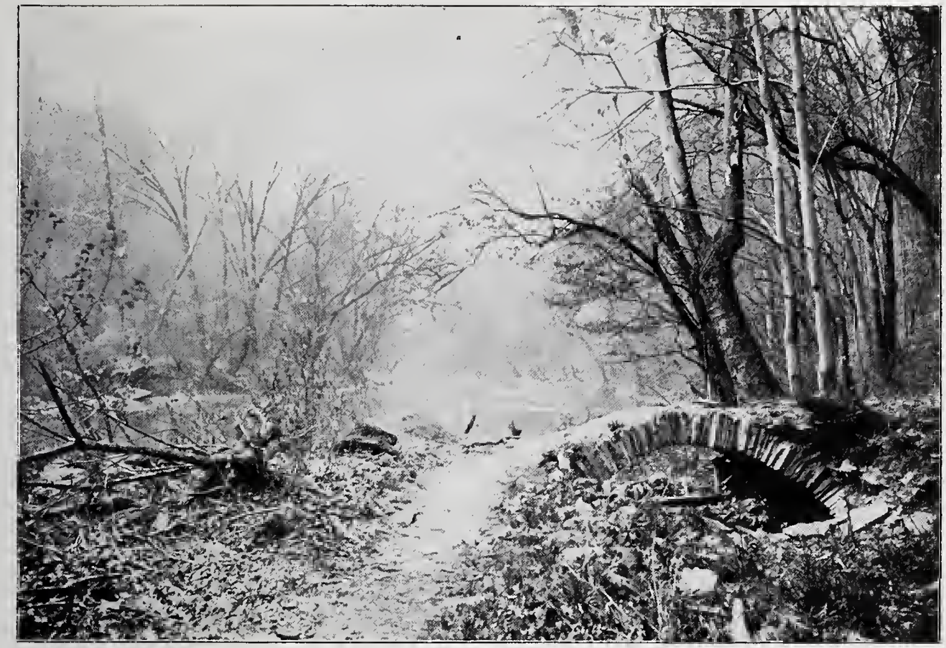
When telling anything of this kind tell every detail, give the kind of chemicals used and in what state, powdered or crystallized, and if any are unusually expensive say so. If any of them are hard to get tell where they may be obtained and the approximate price. Tell with some care how they are combined, and if there is any phenomenon visible describe it. If you say a ten per cent solution tell whether you use a solution of which the solid is ten per cent of the water, or ten per cent of the finished whole. There is a difference of opinion as to what a ten per cent solution is.

If you use alcohol state if spirit or wood alcohol is used, and if it makes any difference; if real alcohol say if proof ninety-five per cent, or absolute, is the best.

Be careful to give the chemical name of a substance exact. In one of this year's annuals a well known writer says "iron oxalate, 3 drams"; he should be made to eat it. Did he mean ferric oxalate or ferrous? Both are iron oxalate, so the distinction is very important. In an annual of 1899 is a formula for platinum paper in which No. 3 solution is 2 per cent solution chlorate potash. 4 Gm and take 8 Gms of it. What does that mean? Let any one guess. The same formula is in this year's annual not corrected.

Don't forget to say whether the resulting mixture will keep or not, and if it may be used again.

If possible state how many or how much may be performed with a given quantity; this is almost never done but should be. In a formula for intensifying we read "place in a solution of bichloride of mercury until bleached; then into a solution of sulphite of soda until black." An acquaintance tried this, bleached his valued negative and then put it in the sulphite; it did not start to turn black but contracted a sort of brown bubonic plague; he waited a few moments and threw his negative away—rather hasty perhaps—but the writer should have stated that this was to be expected, and a clear black and transparent negative would follow in



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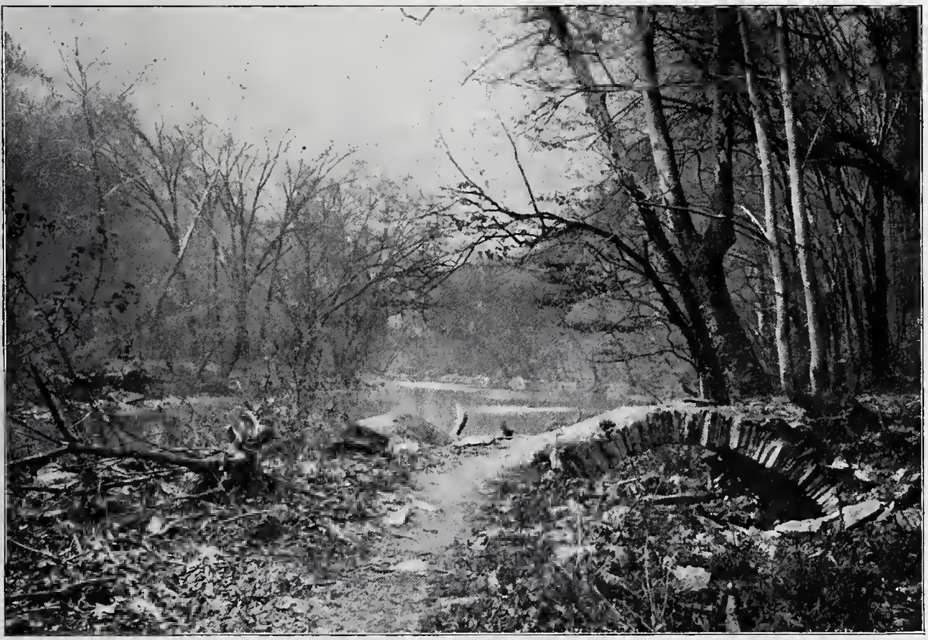


Negative by A. W. Wilde, Germantown, Pa.

AFTER REDUCTION.

FIRST PRIZE.

time. It is a great help to know what to expect.

If temperature is a factor don't say lukewarm (which might be luck warm) or quite cold; give degrees and no one will want to cut your throat. Don't make us guess, we who are busy; we haven't time to guess or experiment; if you have done it and can tell us, do so, don't stop half way.

H. C. Earle.

DEVELOPING PAPERS.

Velox and Dekko, the so-called developing papers, are bromide papers, which are less sensitive to light than ordinary bromide and require a developer of double the strength. They are very convenient for the amateur and produce results far more permanent and artistic than the gelatin papers. Now that prints in various colors can be made on Velox, according to the method described in The Photo-Beacon for March, developing papers will gain still more favor among photographers.

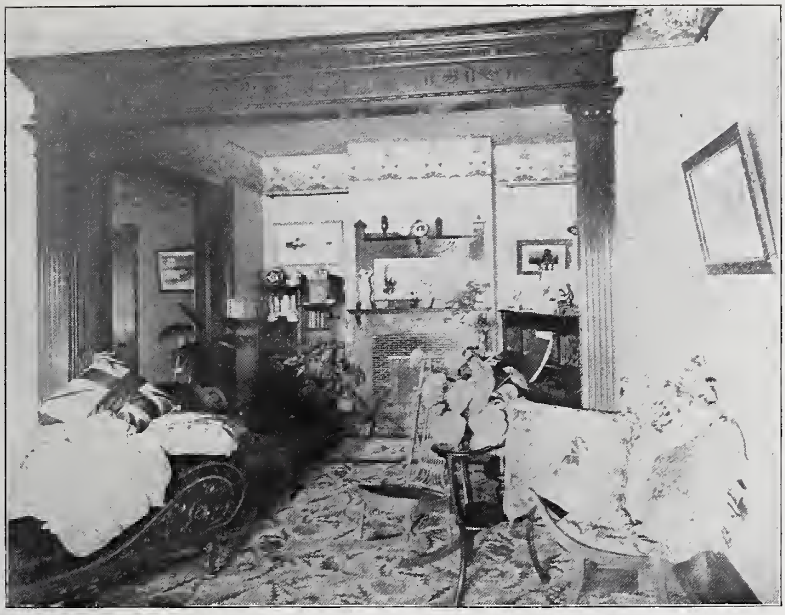
We have six different kinds of Velox, so naturally the amateur is somewhat puzzled which to use. His dealer, in most cases, advises him to use Carbon Velox. With this grade it is almost impossible to get artistic results. Use *Special Velox*. It yields prints possessing those most desirable qualities, gradation and roundness. For broad, sketchy effects use Special Rough Velox; for portraits and landscapes use Special Portrait; while an occasional street scene printed on Special Glossy Velox will give further variety to your collection. Special Velox also comes up slower in the developer — a decided advantage. Some advise ordinary Velox for soft negatives. It is better, however, to intensify the negative, as H. S. Staines has said in a previous article. Then use Special Velox or Dekko, which also works soft.

Developing papers are best printed by gaslight or lamplight. Any ordinary room will do, for all the operations may be carried on at a few feet from a gas flame. Procure four trays. In tray No. 1 place water; tray No. 2 is for the developing solution; tray No. 3 for water; tray No. 4 for acid fixer.

Developer.—This is made according to the formula enclosed with each package; the metol-hydroquinone is the best. Be sure to use the *purest* sulphite of soda that you can get. It is worth the trouble to get it pure. The most important point is the quantity of bromide of potassium which should be used. The best rule to follow is this: Add bromide of potassium solution, drop by drop, until a strip of unexposed paper left in the developer for forty-five seconds will come out clear. Once the required number of drops is ascertained, it will not be necessary to experiment when you are making up the formula again. This same rule applies when you buy the M. Q. developing powder as to the number of drops to be added.

Printing.— Cut a sheet of Velox paper into four or five strips and place one of them over the most important part of the negative. Expose for ten seconds at six inches from the light, if Welsbach; twenty seconds if ordinary gas, or forty seconds if oil lamp. This is to find out the necessary time, since the image does not appear until developing, just as in the case of the dry plate. If, on developing, the exposure was found to be too long, then expose another strip for half the time.

Developing.—Immerse the test strip in tray No. 1 for a few seconds. Pour the developer in tray No. 2 into a graduate and, having rinsed the tray, place the exposed strip in it *face up*. *Pour the developer* over it with one sweep. If the exposure has been *correct*, the print should develop in *thirty seconds*. If the print has been overexposed, the image will flash up in the developer and be muddy in the shadows. If underexposed, the print will have to remain too long in the developing solution, and hence the whites will be stained. As soon as the print is developed, pass it through tray No. 3 containing water, to the acid fixer in tray No. 4. Rock tray No. 4 for a few seconds so that the print will be entirely covered with the solution and leave it there for twenty minutes. It is best to write the number of seconds



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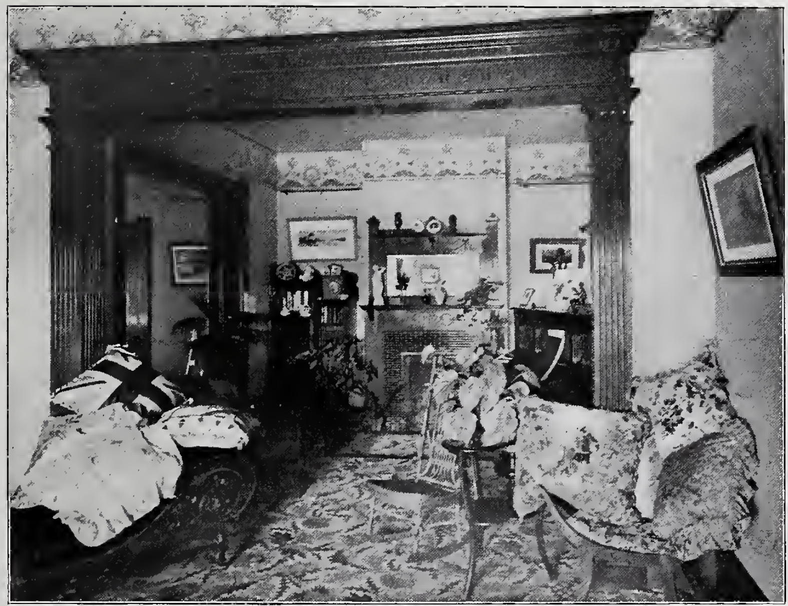


Negative by W. A. T. Sneatman, Winnipeg, Canada.

AFTER REDUCTION.

SECOND PRIZE.

on a slip of paper and attach it to the negative for future reference.

Vignetting by Artificial Light.—In the center of a cardboard about 8 by 10, cut an opening about two inches wide. Place the printing frame twelve inches from the light, remembering that double distance requires four times the exposure. Place the cardboard between the printing frame and the light, so that the light falls on the part of the negative that you wish to print, and move the cardboard back and forth during the exposure.

Printing in Clouds.—Proceed as with printing-out paper, only print the clouds first, holding the frame twelve inches away.

Special Use of Carbon Velox.—A good picture can often be obtained from a poor negative by making a print on Carbon Velox, retouching it with a lead-pencil and copying it.

N. J. Melville.

THINGS PHOTOGRAPHIC.

Fatal Carelessness.—One day while far away from home I came to a very beautiful landscape, lighted from the best direction, and with very appropriate clouds. I had just one plate left. I focused the camera, put in plateholder, withdrew slide and deliberately got out my watch to time the exposure. Then I noticed I had forgotten to close the shutter after focusing. Instead of the right exposure of about six seconds (5 p.m. color screen, isochromatic plate) an exposure of over a minute had been given, and of course the plate was worthless.

Spoiled Plates.—Such spoiled plates as the above, when you know it would be useless to attempt development, can be used very prettily, if you are an artist or have artist friends, by painting pictures, as of flowers, on the film. Just how permanent these pictures will be I can not say. Pictures painted on film directly after I took them from the plateholder are still fresh after several months.

Formulæ for Reference.—Though I keep in a note-book a pretty accurate record of all my photographic manipulations, I have found a still handier method of keeping formulæ for ready use. I write each formula in ink on a plain 4 by 5 card, and always keep them in a particular pigeonhole of my writing-desk. When I make an experiment in formulæ I write it down on a card, jot down the result on back of card, and keep such cards in another pigeonhole. This is helpful in securing a really good combination of chemicals as a result of a series of experiments.

The Scales.—Every amateur who has left behind the button-pressing era should have a pair of apothecary balance scales (scales and weights cost but 50 cents) and make up his own formulæ.

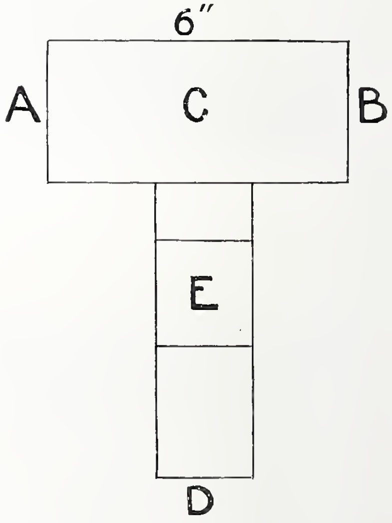
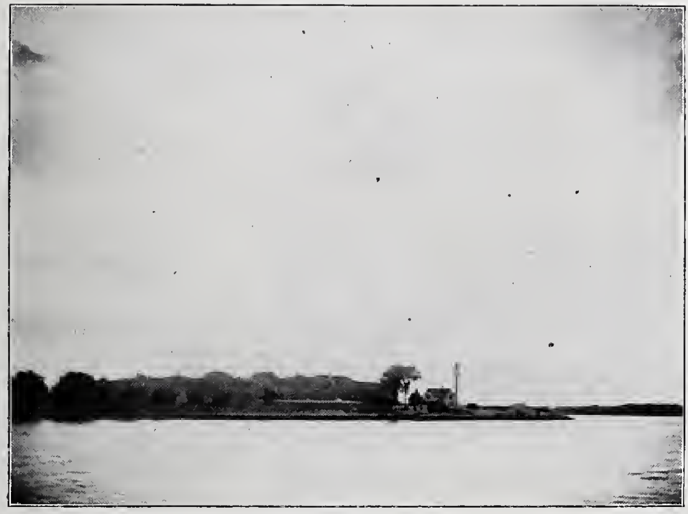


Fig. I.

Without scales one can not accurately combine chemicals. I have made a handy stand for scales, which I will describe. I got a piece of planed wood 1½ by 2 inches, cut two pieces six inches long, one piece four inches, and one a foot. I nailed the two six-inch pieces together in the shape of a T (Fig. 1), also the long and the short pieces (Fig. 2). Now set the end I, Fig. 2, on E, Fig. 1, so that F G is parallel with C D, and nail together from the under side of C D. This makes a convenient stand. Keep the side A B in front. Drive a tack in end F (over A B), and



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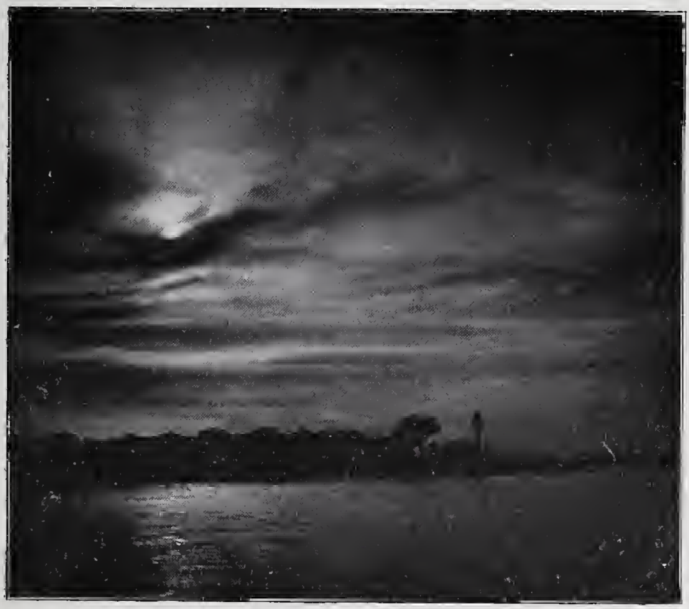


Negative by N. J. Melville, Astoria, N. Y.

AFTER REDUCTION.

THIRD PRIZE.

hang the scales to the tack. They will hang over A B. On A B paste the following table :

OUNCE.	DRAM.	SCRUPLE.	GRAIN.
1 =	8 =	24 =	480
	1 =	3 =	60
		1 =	20

This table will always be ready for use, and one will use it every time he weighs chemicals. Nails can be driven in the upright H I to hold a floating thermometer, test tube, chemical dipper.

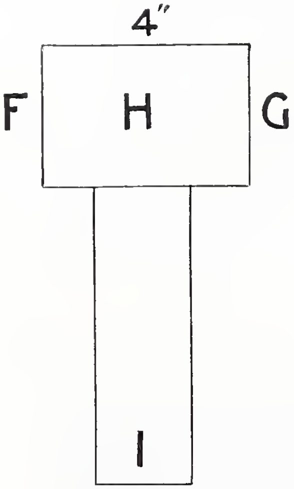


Fig. 2

This latter instrument is very useful. I have one made for chemists. One can easily be made. It should be about four inches long, and small enough to get into bottles. Take a piece of hard wood 4 inches long, ⅜-inch wide and ¼-inch thick, and with a sharp knife outline as Fig. 3. Hollow out *b* ⅛-inch deep with a knife or red-hot iron. The handle can be made thinner, a trifle less than ⅜-inch. Bore hole *a*, for hanging on a nail, and whittle off side under *b* to correspond with hollow. Smooth with sandpaper. This makes a handy instrument for lifting a few grains of dry chemical out of a bottle.

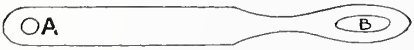


FIG. 3.

A SUGGESTIVE EXPERIMENT.—I began my work in amateur photography with an American 4 by 5 camera, fitted with a Reichenbach, Morey & Will Co. shutter, and rapid rectilinear lens. Later on I got a King Poco 5 by 7 camera, unicum shutter. I now felt like experimenting a little with my old camera, so I took the shutter apart and studied its mechanism. I found that the metal opening in front of the stop plate was almost as large again as the largest stop, *f* 8. Now the stop plate had four openings, *f* 8, *f* 16, *f* 32, *f* 64. When I began making exposures I used all the stops, but finally got to using one stop, *f* 8, altogether, unless I wanted to make a record photograph of a scene before me that had objects in the near foreground and others in the distant background, that I wished to give distinct outlines, in which case I used the small stop with a long exposure ; or for cloud negatives, I used the small stop with short exposure.

Not having use for all the stops I thought they would be good material for experiment. A stop as large again as *f* 8 will take a picture four times quicker. This would be a great help in amateur indoor portraiture. Question, would *f* 4 with this lens give enough definition to make a picture? I knew it would not focus sharp, but I've got beyond the sharp-all-over period. The plate was hard rubber. I took a red hot nail and burnt stop *f* 32 to a stop, *f* 4, as near as I could get at it (two times the diameter of *f* 8). Then with a round file I made the hole circular.

The advantage of this stop is greatly decreased exposure, and, possibly, a better atmospheric effect. The definition is rather diffuse, yet I like the results, and all my friends are pleased.

Now, the suggestion in this experiment is this : Why don't camera makers include a portrait stop in their amateur cameras, of *f* 4? The focus is sufficiently sharp for the purpose. One can focus sharp on the face, and if the background, three or four feet away, is out of focus, so much the better. With this large stop many a plate, especially in child portraiture, would be saved, and the vast number of underexposures would be greatly lessened.

The professionals might object; but if amateur photographers discover they want this improvement, it is bound to come. I should like to learn of other amateurs' ideas and experiments in this direction.

Lens Cap.— Here is another item of great importance in amateur indoor work. Most amateurs' cameras have shutters that make an abnormally loud click when the bulb is pressed in a room. I notice that the subject being photographed, child or adult, invariably takes on a fixed, rigid look when that ominous click occurs. Natural expression is lost. The remedy is to make a cap exposure. Get a pill box, or make a box, that will fit snugly over the outer lens. Stain it black inside with black ink, to prevent reflected light. The cap should not fit so tight as to make one liable to jar the camera while removing. After the camera is focused and the slide withdrawn, put the cap on the lens, open the shutter, and pose the subject. The cap can be taken off noiselessly, and you have the exposure before the subject thinks you have begun. Result: Natural expression. With my experimental stop of *f*4 I have secured good portraits indoors by making the two movements, taking cap off and replacing it in as short a time as possible, say one-half second. Right here I have discovered how to take the baby's photos — a quick exposure to avoid movement, and a noiseless exposure to secure natural expression. A very

Negative by George V. Robinson, Nyack, Mont.

WINDING ITS WAY THROUGH THE MOUNTAINS.

short, noiseless exposure, with a large amount of light, is the secret of successful portraiture indoors.

DEVELOPING PAPERS AS SELF-TONERS.—Velox and other developing papers can be printed in the sun and fixed as self-toning papers. Printing takes from two to six hours; image should be a deep blue. Fix in water 20 ounces, hypo 30 grains. Stronger fixing bath tends to yellow tones. I have secured deep, rich colors as follows: Special Velox, yellowish purple; Carbon Velox, yellow; rough Vinco, a pure purple.

AMMONIUM PERSULPHATE. — I am making a success of cloud landscapes, with color screen and isochromatic plate. From my own knowledge I know of many amateurs who have trouble in this line. They should try the following experiment: Be sure the plate is not underexposed, rather overexpose it. Say on a snow scene, 11 A.M., sun bright, large, bright clouds, expose 3 seconds, *f* 8. Weaken the developer with water; to 6 ounces prepared developer add 3 ounces water. Make up ten per cent solutions of potassium bromide and ammonium persulphate. Add to developer:

Ten per cent bromide potassium	10 drops
Ten per cent ammonium persulphate	1 dram

In this manner I have succeeded in getting much better cloud scenes than in any other way. The best results will be got by making the exposure while the sun is shining.

IN THE LIGHT OF LATER KNOWLEDGE.—"Experience is our only teacher," is a trite saying. It is applicable to nearly all life's experiences. Book learning gives knowledge, experience, wisdom. Few people there are who, could they live their lives over again, would not vastly improve results. In photography especially is book knowledge worthless without experience. We can read and read and read, yet without constant and careful practice we can not learn photography. After we have had this experience we can again read the same books, and with what different results! Our minds respond to ideas we before misunderstood or considered valueless. Whole articles or chapters that before we passed over as dull or without useful application, now become pregnant with meaning. Vague hints are eagerly seized and impressed into valuable experiments. Our practical experiences alone form the stepping-stones by which we can reach such positions as to see over surrounding difficulties, and select the right paths taken by those who have gone before. It all amounts to this: As we gain experience, we can make better use of others' experience. In the light of later knowledge the mind readily comprehends what before was meaningless. In view of these facts I would suggest, to amateurs especially, the following as a useful plan for their own future benefit: Subscribe for three or four first-class photo magazines. At the end of each year bind them in a volume convenient for reference. Buy all the good photo books you can afford. Then, once or twice a year, get out the books and magazines, and read them over carefully. You will be surprised at the ever-increasing benefit you will get from this study, "in the light of later knowledge."

E. M. MILLER.

TOLIDOL AS A DEVELOPER FOR VELOX.

Last March I wrote a short article for this magazine extolling tolidol as a developer for Velox paper.

Inadvertently I attached my address to the article, and I have been receiving a dozen letters or so a week ever since then asking me whether my formula called for "dry" salts or crystals; how much bromide I used; what sort of plates were best; how often I could use the same developer; how long it would keep; how would it work on other papers; would it keep; would I kindly send sample prints, and other questions that are innumerable and irrelevant.

Some of the letters contain stamps for a reply, but most of them do not, and I am going to take this occasion to answer as many of them as I can, and relieve myself from the trouble and expense of writing personal and individual letters to all of my querists.

To begin with, here is my tolidol formula, and I use C. P. "dry" salts:

Water .... 16 ounces.
Tolidol .... 40 grains.
Sulphite of soda .... 90 grains.
Carbonate of potash .. 90 grains.

The tolidol and sulphite should be dissolved in half the water, the carbonate in the other half, and they should be mixed by adding the carbonate solution to the tolidol-sulphite solution.

One gentleman in Louisville, Kentucky, complained that it took him a half hour to develop a Velox print in the above, and that he met with success only by using double the given quantity of sulphite and carbonate that I recommended.

One in Salem, Oregon, said that my formula took so much bromide that he could only get olive tints with it.

Another one in New York city said the formula was fine, but that he did not find it necessary to add any bromide whatever to preserve the whites.

A lady in Winnipeg wrote me saying that she used tolidol on Velox paper with unqualified success, but that she preferred the ordinary dry-plate formula as given in "Tolidol Talks."

A young man here in Chicago called on me and showed me several fine negatives and prints on both Velox and Dekko papers, and assured me that he had developed all of them in the same bath, and that he, like my Winnipeg correspondent, used the dry-plate formula.

All of this set me guessing and experimenting.

I could not help the Kentucky and Oregon gentlemen very much, although it seemed probable that the former must have had very dense negatives and the latter extreme overexposures, with a great likelihood that he was developing by too strong a light.

The New York man presumably opened his paper in the darkroom, exposed it carefully and developed by ruby light, whereby it occurred that he needed no bromide.

The paper that was developed with a dry-plate formula caught my attention, and I tried the scheme forthwith. It was all right, and it gave good results, but it worked more quickly than I like to have it, so I at once returned to and have since remained constant to the formula first given.

Negative by Frank E. Foster, Iowa Falls, Iowa.
THE YOUNG FLORIST.

With regard to dry plates, would say that I have used all of the standard makes with tolidol and other developers, and find that good results can be obtained on any of them with either tolidol or pyro; but I have discarded the latter because it is such a remorseless stainer of films, fingers and towels, and confined myself to the former, which does everything that pyro does, but without staining anything and everything it touches.

Metol, hydroquinone, eikonogen and all of those other modern coal-tar developers are good, and they have an army of strong supporters, but, in my opinion, they are not worthy of mention in the same breath with either pyro or tolidol.

If I did not know that my opinion was shared by a number of distinguished workers, both amateur and professional, I should, perhaps, hesitate to declare my opinion so dogmatically, but it is a fact that many of the most advanced photographers in this country have discarded all other developers in favor of tolidol, and their work shows corresponding improvement.

Finally, and without reference to the subject, if you feel that you have got something to say to the public and want to say it in The Photo-Beacon, be sure that you do not give your address or you will get letters in reference to it from all over the known world, and from towns and villages with quaint and curious names that nobody ever heard tell of before.

Hoping that my former address has been forgotten, I remain, very truly,

Chester A. Burrett.

A PLEA FOR FLASH-LIGHT.

It is a strange but certain fact that flash-light photography is shunned by hundreds of amateurs who have probably seen some very poor ones and formed an immediate opinion that good results are impossible. If it were generally known what wonderful possibilities flash-light photography offers to the amateur, who seeks for art and not for the number of negatives he can make, there would be a great change for the better, and some of the washed-out, streaky studies (?) that we see nowadays would be handed over to the tender mercies of the waste basket.

So many people advance the objections that flash-light photographs have chalky faces and violent shadows, which are very poor objections and betray their ignorance, for if the light is evenly distributed and reflectors used for dark corners, the shadows will disappear like magic and the result is a well-lighted, well-modeled picture.

For genre pictures it is the ideal light, for you can vary the strength and by combinations of other artificial lights fine effects can be obtained that would be next to impossible with daylight.

Before going any further let me dispel that illusion that flash-lights are confined to interiors, groups, etc. Camp-fire scenes are very unique and beautiful and are easily made if you have some friends who will pose for you. If you are fortunate enough to live near a wood, select a clearing about twenty feet in diameter and build a fire in the center of it. Take a lantern to focus by and if there are any logs near by they can be used for seats. Have one of the party sit with his back to the camera to screen it from the flash and prevent your plate from fogging. Pose your subjects in easy, natural attitudes and be especially careful not to have them all alike or have them all look as solemn as owls. Have one of them standing up, another lying prone on the ground. If the scene is to represent a hunting camp, have a dog or two in the scene and a rifle leaning against a tree. An old man posed as though he were telling a story, with the rest grouped around in attitudes of attention would make a good picture. These are but a few of the many ideas that will suggest themselves to you when you are on the ground.

The amount of powder used for the flash will depend a great deal upon the number of the party, their proximity to the fire and the clearness of the air. If the wind is blowing, start the fire with as little smoke as possible, but if the air is still and the smoke goes up it will improve the picture immensely to leave it in.

A spoonful or two of powder will answer the purpose and should be wrapped up in thin tissue paper and given to the person who screens the camera so that he can toss it into the fire at your signal.

Flash-light cartridges could be used, but the subjects are apt to have a strained, tense look from watching the fuse. Arrange your picture so that a dark border will show around the group, for if the figures occupy the whole plate there will be no evidence of the surrounding darkness. If you should use more powder than is necessary and the faces are too glaringly white, they may be reduced with a brush while still wet.

In printing these pictures use a paper that will give black and white tones, such as Velox, Dekko or Platinum.

Another thing that can be done with flash-light and makes a very curious and amusing picture is two pictures of the same person on the same plate in different attitudes, such as a man playing cards with himself, boxing with himself and various other queer arrangements. Take a piece of heavy sheeting about 8 feet wide and 10 feet long and size it with glue; then paint it jet black, being careful to use a paint that gives a dead finish, so that there will be no shiny places to reflect the light. There is a paint mixed with water which gives a duller finish than one mixed with oil.

After the background is dry, hang it on the wall lengthways, so that three or four feet extends on the floor. Let this hang loose so there will be no crease where the wall and floor meet, for this would show through one of the figures. If you make the picture of a man playing cards with himself, have him put on a suit of light clothes and use a light-colored table with no spread, or if you do, it must be a dark one, else the double exposure would make it too white.

Place your table in the desired position and be very careful not to move either the camera or the table until the second exposure is made. Have your subject take his position on one side of the table and make your first exposure; then have him take his chair over to the other side without moving the table and assume a different attitude with his hands in his lap. Make the second exposure and the picture is complete. The subject may change his clothes between the exposures and give a little more contrast to the picture.

A number of interesting pictures can be made in this way without having a multiple attachment on your camera. The same amount of powder must be used for each exposure or one of the figures will look pale in the finished print.

I have endeavored to show two things that can be done by flash-light that are entirely out of the run of ordinary flash-light photographs, and you may be sure there are many more if you only sit down and think.

The flash-light is especially helpful to the person who has no time to take photographs during the day and in taking interiors one does not have to overexpose one part to get detail in another.

Thomas Young.

CONVENIENT TRAYS.

Thinking perhaps an article on home-made trays would be of interest to the readers of The Photo-Beacon, I give a brief sketch of some of my work in that line.

I have found it very important to have plenty of trays, if one expects to be successful in making good pictures and not spoil a great many plates in the darkroom or prints in toning. My first experience in photography was with a pocket kodak; I found it very inconvenient to develop the films by cutting them so as to handle them in my small tray, so secured of a near-by carpenter a piece of white pine 2 by 3 by 40 inches and had him plane it on all sides; and then came the task of making the tray.

First cut out a groove 36 inches long by 1¾ inches wide by 1¼ inches deep (A, Fig. 1), leaving an equal margin on each end and side of piece of pine. This is easily done with a mallet and chisel. Then make a lip at corner of tray (B, Fig 1) to pour out developers. Now sandpaper tray well and hold upside down over fire, heating as hot as possible without burning; then pour melted paraffin in tray and spread with brush or small tuft of cotton. Repeat until wood is thoroughly saturated. Finish outside of tray with varnish or shellac to protect wood from water and chemicals; shellac is preferable.

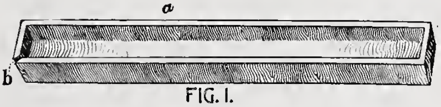


FIG. I.

In developing unroll full length of film, fastening each end in tray with a carpet tack; flow water over it, making sure that all parts are covered. Then pour water off and flow developer on as rapidly as possible. Leave film fastened in tray until nearly developed and then loosen to lift out and examine. If some parts develop faster than others they can be lifted out of developer for a short time, in this way developing all parts nearly equal. If the same film has both time and snap-shot exposures it is best to cut it, developing the time exposures separate from the others. In this way one whole film can be developed nearly as quickly as any part of it.

For 4 by 5 inch trays use a piece of pine 2 by 7 by 8 inches, and make same as long tray, leaving about an inch margin on sides and one and one-half inch on ends. In the bottom leave a strip across the center one inch wide, one-eighth inch higher than the remainder of the bottom (Fig. 2). This prevents plates from adhering to the bottom of tray, making them easy to remove.

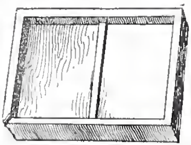


FIG. 2

For my larger trays I secured a neat box with dovetailed corners, and cut sides down with a saw to the desired depths, nailing bottom and corners very securely. With a few extra boards for bottoms, have made from three to four trays from one box. Then make a frame (Fig. 3) the outside dimensions of which are just one-quarter inch smaller than the inside dimensions of tray. Secure a piece of rubber duck, large enough to line the tray, and stretch it on frame, rubber side to frame, and fasten at top of frame with about three tacks on a side, and fold the corners in the same manner a tinner would in making a square pan. Next thoroughly coat inside of tray with glue and insert frame upon which duck is stretched, and press duck firmly to bottom of tray; then loosen duck from frame, turning edges over top of tray, tacking with No. 2 upholstering tacks. I have found all of above trays very light, convenient and durable, and the expense in making them is very small compared with the cost of good trays of the same sizes. They are easily made and any one who enjoys making good pictures will likewise enjoy making their own trays, printing frames, etc.

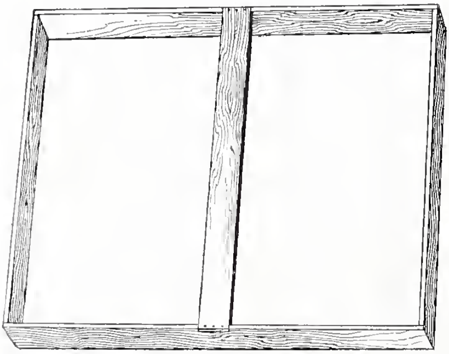


FIG. 3.

C. W. Hammond.

The progressive firm of J. Hauff & Co., best known as the discoverers of all of the new developers recently introduced, such as metol, ortol and adurol, are again coming to the front with a new article, which our readers will find advertised and offered by their agent, Mr. G. Gennert.

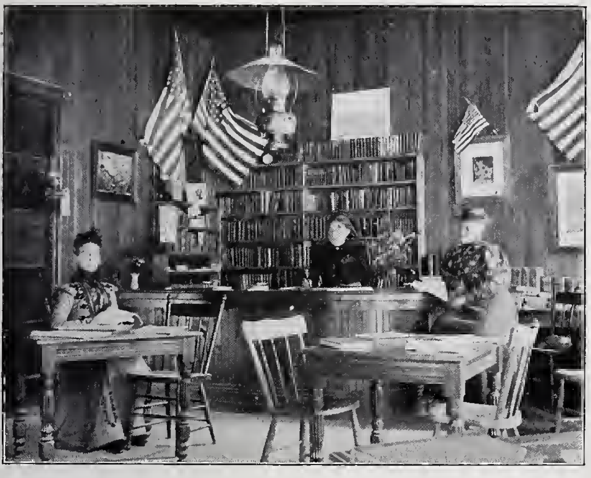
We refer to pyrol. Pyrol is a new form of pyrogallol, and certainly an improved form, as it has several important advantages. A sample which we received from Mr. Gennert shows pyrol to be a beautiful crystal of needle formation, entirely different in its appearance from pyrogallol. Instead of being bulky, it is as compact as metol or adurol, and a pound bottle is no larger than an ounce bottle of pyrogallol. The condensed crystalline form offers much less exposure to the atmosphere, and is therefore a more permanent form, as the chances for oxidation are largely reduced. Pyrol can be poured from the bottle; it is not necessary to touch it with the fingers, and the staining of the latter can therefore be entirely avoided.

In the solution, pyrol likewise shows excellent keeping qualities, and if anything, greater developing quality than pyrogallol.

INTERIORS.

The first point to be noted in photographing a room is its size. A small room, however cozy, does not lend itself to photography.

The arrangement of the room is next in importance. Not long ago I was asked to photograph a room that, until I had looked at it with the eye photographic, I should have said would make a pretty picture. Every part of the



Negative by Miss Daniels.

room was of equal interest; there was no side or corner where there could be a graceful grouping of furniture. In one corner was a desk, then came a window, then an organ and another window, a case of curiosities and some more windows, a table, some chairs, a genial base burner and a few other articles of home use, altogether making a homelike, attractive room, but useless for a picture. I gave it up at the risk of giving offense. I knew the picture would be a bigger offense.

Simplicity is the next point. Most interior pictures have too much in them and look more like bric-a-brac shops than a place where people live, and move without knocking things over, and have their being comfortable.

The lighting of the room is very important. Happy, indeed, are we if the light comes from the point opposite the one we wish to picture. Even then we must look well to reflections or we will get curious draperies on our pictures or our clock will have no face. If we must include a window, Alfred Steiglitz has kindly laid down a rule for blocking them out. "Cover the outside with black cloth or brown paper or pull the sun-shade down. At the end of the exposure give an additional exposure of three minutes or less with the shade up." To quote from Alfred Steiglitz again, the camera should not be over 4 feet 6 inches high — 4 feet is better.

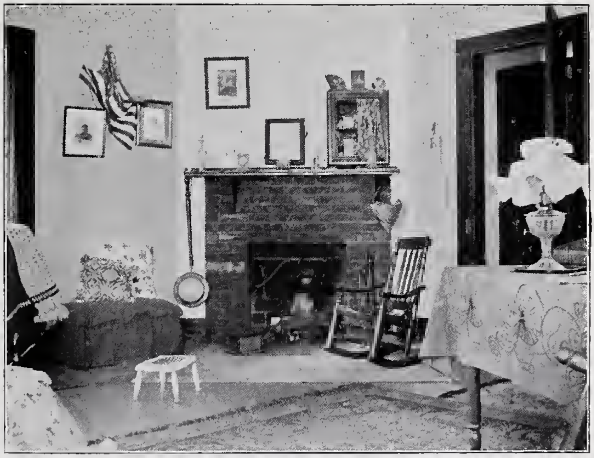
Have a hint of a chair or a corner of a table in the foreground, or it will look as though space had been cleared for dancing.

Doors are inartistic things, but if left ajar are not quite as uncompromisingly plain.

A small stop, long exposure and slow plates (Seed's or Cramer's non-halation) give good satisfaction. Do not attempt to have people in your interior pictures unless you are more gifted in the art of posing than is your humble servant.

Marie Antoinette Daniels.

Under the title of "Modern Printing Processes," George K. Hazlitt & Co., Chicago, issues a very practical book, treating of gum bichromate and platinotype papers. The preparation, printing and developing of gum bichromate papers are fully dealt with, and so is the manipulation of platinotype papers by the aid of glycerin and bichloride of mercury. Price, in paper, 75 cents; in cloth, $1.



Negative by Miss Daniels.

Home Hobbies, Arts and Crafts

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CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER.
INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

SAWS.

It has been our experience that many people, both young and old, find it quite difficult to distinguish between a rip saw — a saw for cutting with the grain of the wood or separating the fibers so that our board becomes two parts — and a cross-cut saw, for sawing across the grain. When the saw is new and fresh from the factory or hardware dealer, this should not be difficult. But after they have been filed by the novice we have seen saws that would puzzle anybody to tell what they were intended for.

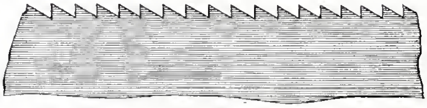


FIG. 6. RIP SAW.

Perhaps the answer of the small boy in a class that one day were having the difference between the two saws explained to them may help some of our readers. It helped the class. After the talk was over the teacher, wishing to see how much they had remembered, asked a few questions. No one seemed able to explain how they could distinguish the cross-cut from the rip until a bright boy spoke up and said he knew which was the cross-cut saw, "It's the one that has the small teeth in the middle." Now, if we examine a cross-cut we will see that every other tooth shows where it has been filed on the bevel, and to the small boy's eye it made the tooth look smaller than its neighbor on either side.

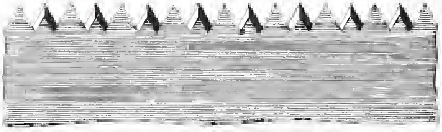


FIG. 7. CROSS-CUT SAW.

We notice in Fig. 8 that the saw is wider at the bottom or the points of the teeth than at the top of the blade. If we take our saw and hold it with the teeth up and look along the edge, or "squint it," as the woodworker would say, we will notice that every other tooth is forced out to the right or left. This is the set of the saw. It is done to prevent binding as we work. Also that the dust formed by the cutting edge of the saw can be dragged out as the saw is pushed forward. This setting is done in a variety of ways; with a hammer and a tool very much like a nail, or a piece of a three-cornered file, also with a special tool that is pressed by the hand like a pair of pincers.

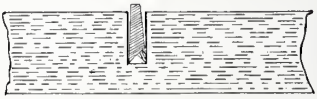


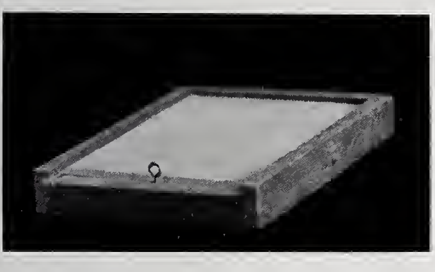
FIG. 8.

In using the different saws a few rules should be observed. Avoid short, jerky strokes. Do not bear hard on the saw. It will cramp or bind if you do, and the blade is liable to bend or buckle. Stand so that you can see both sides of the saw; that will help you to keep it straight. And take as long, steady strokes as possible, almost the full length of the saw.

The Photo-Beacon "Exposure Tables" are guaranteed to be correct. Price, 25 cents.

VIGNETTING PRINTS.

A few years ago, when the glossy print and white background were so much in vogue and the vignette mask was the complement of the printing frame in almost every case, there was no end of trouble caused by that same vignette mask. I feel sure that I was not the only photographer whose patience was so often tried. A new mask must be made for almost every negative, or an old one patched over, or cut out, or in some way changed to make the desired shape, until there was accumulated a great heap of mutilated plate boxes and cepa skin, which were always in the way and always getting holes punched into them, necessitating more cepa skin and paste and more work and patience. I finally contrived a little device by which all these troubles were dissipated, and although the vignette mask is a thing of the past the day of usefulness for my little invention is not over, for wherever tissue paper is used over a printing frame this article is much more convenient and better. It consists of a frame made of pine, the outside a little smaller than the printing frame upon which it is to be used and about an inch and a half high, with a groove cut into the two sides and one end, the other end being just as high as the groove, so that a ground glass can be slid into the frame. When the glass is in place put a screw-eye in the frame at end of glass to hold it. I send a photograph of one of mine and a better idea can be obtained from it.



For a 4¼ by 6½ printing frame I use 5 by 7 ground glass. It is better to have it a little larger than the negative. The ground glass frame can be secured to printing frame by two small brads, one on each side. It can then be easily removed or changed. A photographer will soon find how convenient this article is for regular plain printing, or when any part of a negative should be masked it is so easy to add a piece of opaque paper or to paint the ground glass with some color that will wash off. One will find it especially convenient for printing in clouds. A number of these frames can be made at really no expense if you do the work yourself. I grind my own glass with dry emery powder, using spoiled negatives, after cleaning them and selecting the clearest and smoothest glass. Lay a larger glass on a table, put on it the powder, a little at a time; lay on this the smaller glass, bear on with the hand, making a rotary motion, thus grinding both glasses at the same time. It is good work for evenings and rainy days, and in addition to the use for ground glass that I have mentioned many a dime may be saved by making one's own backing for window transparencies and focusing screens to replace broken ones in cameras.

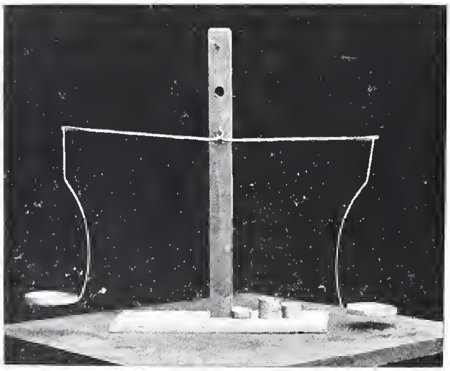
Frances Carver.

SCALES FOR AMATEURS.

A pair of prescription scales are not usually made by the camera owner. They are generally classed among those necessary articles that must be bought outright. Yet a pair made by myself last winter answers the purpose very well. The cost is almost nothing, and anyone who has a few tools and the "knack" of using them can do the work in a very short time.

Secure an inch board, about the size of The Photo-Beacon, for a base. In the center of this fasten by nailing from the under side an upright of wood about fifteen inches high. The size of this piece is immaterial, but as a suggestion let it be two inches square at the base, tapering to one inch at the top. Near the top of this upright drive a stout steel nail leaving a half inch or so protruding. With a file bring the upper side of the nail to a knife edge for a fulcrum; procure about eighteen inches of No. 7 galvanized wire, bend it around with a small loop in the middle, making the two ends and the loop in a straight line. This loop is to hang on the fulcrum, and it is best to file in the loop a small notch so it will always rest at the same point.

The ends of wire are now to be flattened by hammering, in order that a hole one-eighth of an inch in diameter may be drilled through. Be sure that the holes are at equal distances from the notch in the loop. (If you do not have access to a drill for metal, notches might be filed in the top of the wire.) These holes are to contain the No. 13 wire that extends down and holds the pans. These wires should be bent with a small hook at the upper end; the under side of the hook brought to a knife edge with a file as in the case of the fulcrum. Then brought down with a curve in such a manner that they will support the pans about two inches above the base, when the scales are balanced.



For pans, take any tin-box lids of suitable and equal size, and solder them to the wires. Not being an expert at soldering, I experienced a little trouble here in making the solder adhere to the galvanized wire; but by bending it under the pan in somewhat the form of a letter S, and building the solder over it in several places, it had to stay.

If when complete the scales do not balance, add more solder to the under side of the lighter pan until the desired result is obtained. For weights, take a pound of No. 13 wire and a pair of wire cutters to your friend who has a pair of scales. Cut from the wire about what you think will make an ounce and a little over. Weigh this piece, then if you have guessed rightly cut off a small piece and weigh again. The idea is to get a piece that weighs *exactly* one ounce. When you have secured this, it will be somewhere near a yard in length. In order to make it more convenient to use as a weight it should be coiled about a round iron something like an inch in diameter (or a broom-handle will do). It will now be about an inch in diameter and an inch high, and if the weighing has been accurately done it will give you as correct weight as any scale you can buy.

The other weights are to be made in similar manner, except very light ones need not be coiled.

James E. Taggart.

A RACK FOR HOLDING FERROTYPE PLATES.

Although the glossy print has been superseded somewhat by other styles when artistic results are desired, it is the best for some purposes and no doubt will continue for some time to be the one made by the majority of beginners.

With one or two ferrotype plates the disposition for drying is not very difficult, but to arrange a larger number so that they will dry evenly and quickly is not so easy.

The accompanying sketch shows a folding rack made by the writer, which has given such satisfaction that he thought the idea might be useful to other readers of The Photo-Beacon.

It consists of two pieces of wood *a* (hard is preferable, but soft was used for this one) about one inch square, and twenty inches long with saw-cuts about ⅜-inch deep and two inches apart, starting two inches from each end. On the sides of A near the ends are screwed the pieces B so that their inside edges come just at the end saw cuts, and outside of B are screwed the pieces C. These should be placed so that when pieces B are vertical, their outside edges will rest against C.

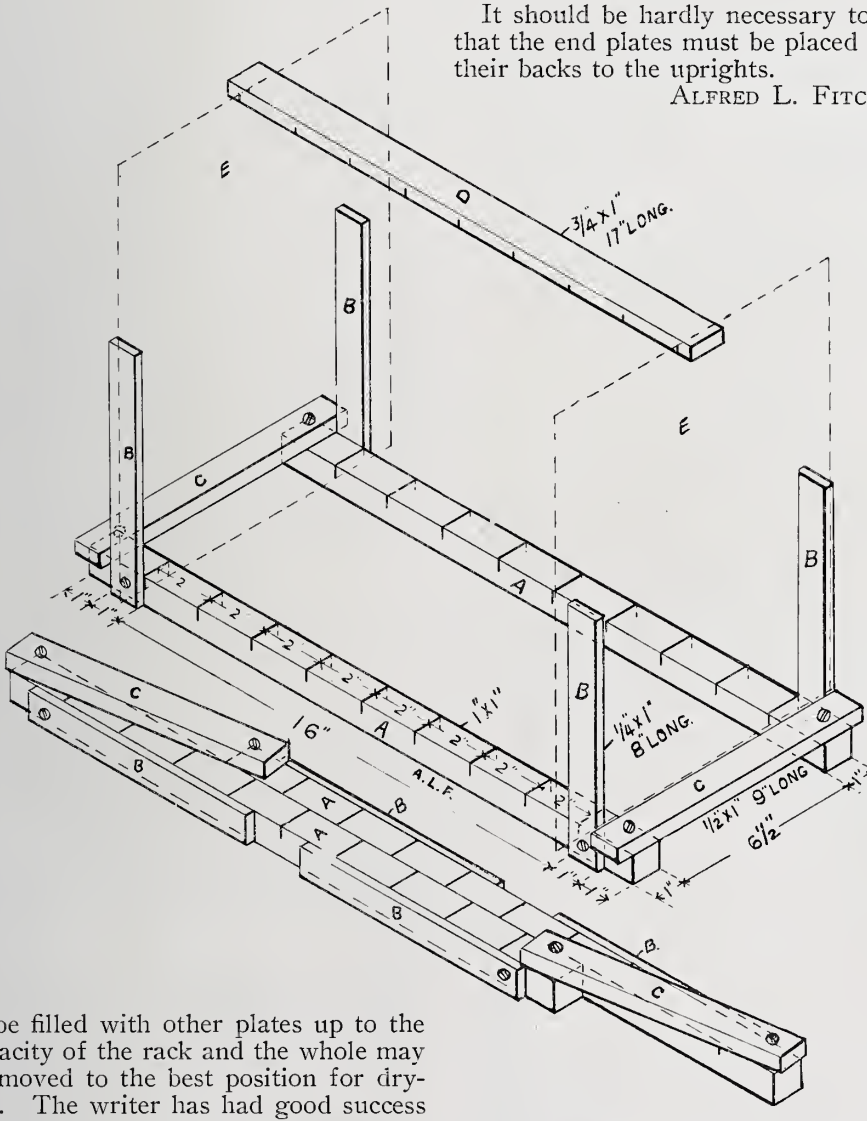
The method of use will be understood by reference to the sketch, which shows in dotted lines a ferrotype plate in each of the end saw cuts. They are joined by the piece D which has saw cuts similar to A, and if care has been used in the construction they will be quite rigid. The intermediate cuts are to be filled with other plates up to the capacity of the rack and the whole may be moved to the best position for drying. The writer has had good success by placing it over the register from an indirect hot water radiator which gave a gentle current of moderately warm air.

When not wanted for use the rack may be folded as shown and the screws should be loose enough to allow this to be done. The rack shown will hold nine plates, but the size may be varied to suit the user's requirements.

The pieces C are shown projecting beyond the pieces B, but if the figures are followed the ends will be just flush with the sides of B.

It should be hardly necessary to say that the end plates must be placed with their backs to the uprights.

Alfred L. Fitch.



HOW TO MAKE A GOOD PRINT TRIMMER AT SMALL COST.

All that is needed to make this print trimmer is (for 4 by 5 prints) a block of wood, oak is best, 2 inches thick, 6 inches long and 6 inches wide; three medium sized screws, one large screw, two pieces of brass rule, 6 and 8 inches long. The brass rule can be bought of any printer for 15 cents. The rule should be ⅛-inch thick.

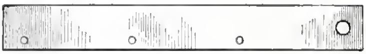


FIG. 1.

See that the block of wood has perfectly straight edges. In the 6-inch rule get four holes bored (see Fig. 1) and in the 8-inch piece one hole (see Fig 2). Any tinner will bore the holes for 5 cents.

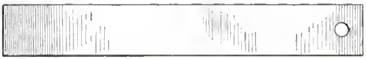


FIG. 2.

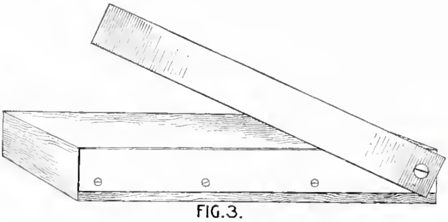


FIG. 3.

Screw the smaller rule to the block, using the three small screws and holes. Then take the large screw and fasten the larger rule to the smaller and to the block. Be sure to have the large screw tight.

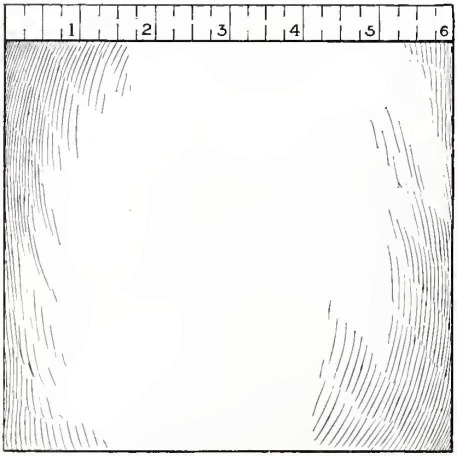


FIG. 4.

Take a piece of wood ruler exactly 6 inches long and nail along the front edge to measure with. This trimmer will cost about 20 cents and will cut just as good as a trimmer costing $1.50. If a handle is wanted there is room to fit one on the longer piece.

PERCY L. TRUSSELL.

KIRK, GEARY & Co., Sacramento, California, sends us a copy of their catalogue of photographic supplies (amateur edition) which is very complete and right up to date.

A READER of THE PHOTO-BEACON in Dawson, Yukon Territory, writes: "This is an ideal country for photography, always excepting the difficulty of getting, during the summer months, a dark place for developing in, as it is daylight all the time. I got a beautiful sunset effect last night at 11:30. We have beautiful clouds and they appear in the negative in fine style. I will have time for a lot of work this winter during the long nights."

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL, Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

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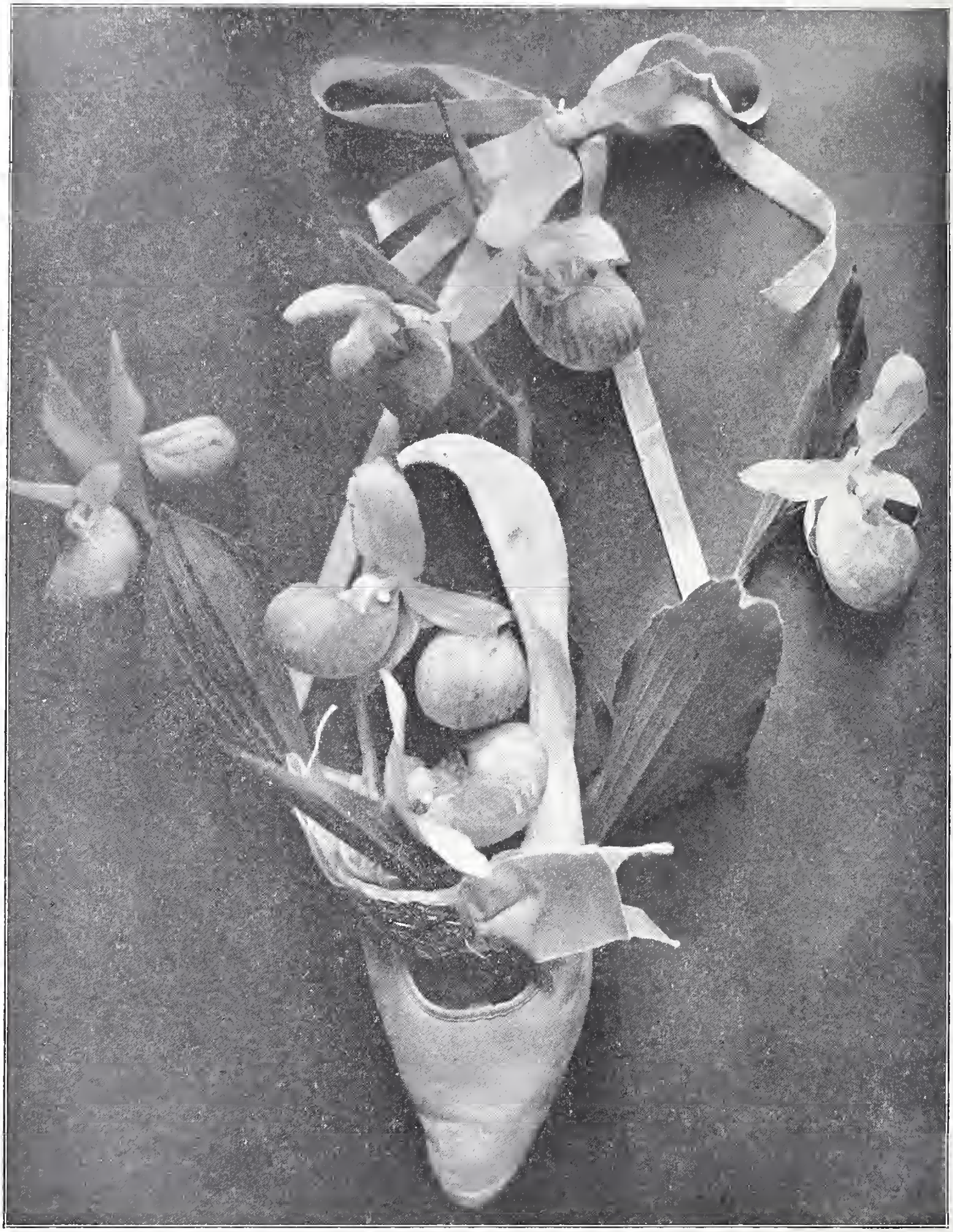


Negative by W. H. Sargent, St. Johnsbury, Vt.

LADIES' SLIPPERS.

(First Prize.)

THE
PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. SEPTEMBER, 1900. No. 9.

BUBBLES.

(Paper read before the Photographic Convention of the United Kingdom.)

Some of you may remember "A Study in Gum," by an American, published in *Photograms* for 1899. It was a rather awkwardly posed girl showing a "sticky back"; and I hope some can remember a much more perfect girl's back by Mr. Fellows Wilson in last year's Royal Exhibition. The two portraits will serve well as a comparison of the bad and the good.

It is now almost universally acknowledged by artists that the one distinctive and precious quality of a good photograph is its delicate gradation (hardly to be equaled by any other black-and-white medium), and its power, for certain subjects, of rendering texture.

The study in gum referred to gives us a back that looks as though it suffered from a bad attack of eczema, and yet we are told this is what we are to line up to; that this is an advance; that this is Art.

Now, before we accept these mentors we want a reason (artistic) for changing our opinions. These gumists may shrug their shoulders and squeak and gibber for "perfect freedom," and shrilly ejaculate, "Art!" but we will not accept such shifty arguments. It is useless crying liberty when there is no liberty. We are hard bound by the mechanical conditions of our craft, and if these workers require that "perfect freedom" which they are always crying for, let them become artists and adopt media where there *is* perfect freedom, and leave us poor photographers alone.

Again, some of you may remember the photograph of a quite commonplace "River Scene at Hampton Court," frame and all. The sail is altogether wrong in value, the water is woolly, and the photograph is as bad a bit of river scenery as it has ever been my lot to behold. Compare with this the neat little seascape, "Landing Cattle at Morocco," exhibited at the Royal. In this latter we have true values, delicate gradations, unobtrusive forms, fine texture, and no frame.

These examples will serve well to illustrate what a section of the photographic world is giving up for a mere smudge, false in every pictorial essential.

I may be told these are not fair examples, but others could easily be produced. In all the best gum-work I have seen these essential and fundamental errors abound.

Now, in looking at the examples of fine carpentry or cabinet-making, shall we say, in which these precious daubs are enclosed and afterward photographed, one is constrained to think that the ideal these amateurs set before themselves is to produce something like a *photograph of a painting*, and they imagine this is progress, this is art.

All of us, even the youngest, are liable to err, so I was careful to place a number of these gum-caricatures before one of our best painters. Shall I ever forget the jeering guffaws with which he picked up the prints, and, having been in France a good deal, he said, with a wicked smile, "*Ce sont des articles de Paris*," for the names of some well-known French daubers were beneath them. Now, it seems to me this "gum" printing is one of the greatest bubbles floated upon the limpid stream of pure photography, or pictorial photography, or whatever name you may be pleased to call it.

Those who would have us sell our birthright for a mess of gum will, I feel confident, never succeed in their object; and, when they talk to us of art, I, for one, will burst into a mocking laughter at their solemn pretentiousness; and I regret to see among their number some who used to glibly talk of "subtle tonality," "values," etc.—evidently gum-paint cant on their part, and I should like to know what the young woman with the sticky, diseased-looking back thinks of the outrage. I'll warrant her back is far more lovely than such a sickly representation of it.

France has given us much in true art to be thankful for; but these *bourgeois* French photographers make us begin to wonder if the seeds of Philistinism are there, as the seeds of political and social decay are there, and strongly sprouting. As I have said elsewhere, at the last Paris Exhibition I could only discover that Scandinavia had struck any new note in art; and perhaps, after all, art itself in Paris is merely imitating a splendid tradition, and so becoming as sterile as its population. Such things have repeatedly happened in the history of Art; but I, for one, hope fervently that those ridiculous photographic travesties are perpetrated by the uneducated Philistines of that country, and a French Philistine is hard to beat. One of these scribbles a deal and causes us much amusement, and thus adds to the gaiety of nations, and gives such artists as Mr. J. Pennell a fine subject for satire.

To sum up this point: the gum process destroys tone, texture, and with it values and atmosphere; it makes the result coarse and false, and to look like the photograph of a painting—a *pis aller*, which is merely a rough index of the painting, and which no real artist is satisfied with or cares a toss about, except merely as a rough and crude memorandum to keep when he has sold his picture; and some prefer a simple pen-and-ink sketch for this purpose. And, lastly, it is handwork, and not photography. Another bubble of less pretentious size and less objection is the "dodged printing fake," for sometimes that might come true, but it rarely does. I have been greatly amused to read, in a shilling guide to pictorial photography, that the greatest care must be taken in selection of the view, and in exposure, etc., so that the values may be true; and straightway he gives a ponderous apparatus for "faked printing," and advises the use of clouds taken with a small aperture, an error I long ago warned the operator against. His advice continues in the same vein, that is, to "sun down" the print, and in his work he does not hesitate, by scraping the film or some other dodge, to make garish high lights. In short, his chapter on printing is a pocket encyclopædia of how to ruin values, and often textures, and all this after telling us to work in the initial stages most carefully in order to secure true values!

Doctor Hurter and Mr. Driffield show us how to do that scientifically, so far as exposure and development go, and I have endeavored to do it with regard to other matters, and what is the result? The same issue of *Photograms* contains a print produced by this "sun-downer," and I ask you frankly, "Is it art?" It is certainly false in many respects, has a meretriciously deceptive appearance to the unwary, and deceives the amateur. But what has the landscape painter to say to it? I showed some of these prints to a great landscape painter, and he simply asked, "Why the fellow did them; what was he after?"

I ask the same question: If pure photography is not good enough or "high" enough for such as he, by all means let him become an artist, and leave us alone and not try and foist "fakes" upon us.

I suppose these fakirs appear in all arts—"*il faut être dans le mouvement,*" dear boy; "must conspire with 'notions,'" like the cheap-jack; "when one stock of rubbishy goods fails, must bring out another, old friend," I suppose is the explanation. It's commerce, but is it art? It isn't photography. We all remember a painter who tried the faked photo dodge, using photography as a basis; we all, doubtless, remember what his fellow-artists said; and yet he is the prince of photo fakers, if he care to assume the title; and the poor "sundowners" are far, far behind him at the game.

I do not suppose you, I or any sane man cares one brass farthing or the proverbial "two penn'orth of gin" what our fakers do in the faking line if they only don't pretend to us it is something new, something we are to follow —"Art, dear boy!" The British public *will* have the fake of retouching, and the photographer must live; but we should think him an ass did he begin to shout and yahoo that he had found the recipe—the new recipe, mind you!—*the* solution of the pictorial photograph — in faking.

The appreciator of the gum plaster and photo-faking is, doubtless, the type of scribbler who is responsible for foisting the sickly monstrosities of Aubrey Beardsley upon the unwary public, and for driving Mr. Whistler abroad, and for causing dishonest dealers to cover old and worthless pictures with white of egg, and let this dry in cracks to cheat the ignorant, another form of gum-work, in fact.

Returning now to the two principal exhibitions of last year and to *Photograms* of 1899, one meets with the gum landscape of an American. Now, if this conveys anything to any one, I ask to be instructed. A meaningless smear is said to represent "Mountains in North Carolina." Now, it is said Americans do things on a big scale; but, to judge by that plaster, the mountains of North Carolina look very much like a photograph of a scrubby English hedge that has been "treated" by a good, brawny British road-scraper who has set about clearing the country-side up. So much for the great rushlight of the American school. Mr. Steiglitz and Mr. Day are the best exponents of American photography, and I rejoice I've seen no gum plasters or fakes by either, and I hope I never shall. Then we have the French

Negative by George G. Tingley, Mystic, Conn.

LIGHT BEYOND.

"school" and its infants. In "A Spring Snow" we find the composition is childish; in "A Lark Shooting," which might have been good had it been pure photography, though it only proves the Frenchman as ridiculous at *le sport* as M. Tartarin, of Tarascon; the coarse daubs of white, and lack of tone value in what might have been a beautiful and delicate distance, ruin it, and prove the 'prentice hand. Next we find another worker's theatrical and ill-posed women. They recall the sweepings of the worst type of Paris *atelier*. The chief interest is that this amateur has an island where he retires with his models, an idyllic picture that makes one long Mrs. Grundy were dead and her soul gone to Paris. This series finishes with two commonplace, most penny-plain peasants, "Returning From the Fields," and "A Study," a young woman performing athletic feats with lilies; and all along with this jumble of inanities we have the most solemn, inane and pretentious letterpress by the great and original gum-splodger himself. It is, indeed, a relief to turn to the manly and healthy works of our Colonial brethren in New Zealand.

But to continue. Of what avail is such a picture as that hung in last year's Royal, "In June"—woolly trees, degraded lights, impossible grass — and all to represent June, the glorious month of light and leaf. The photo looks like a miserable December evening, with the leaves as though suffering greatly from cell congestion. Another equally bad salon companion picture was a "Gleam of Sunshine," "subtle tonality," again, I presume — only gone wrong. As dismal a sun as one could expect in Hades.

I appeal to you, is this photography? I am sure it will not last — can not last; and we will welcome the new parlor biographs, if only as a sure and certain kill-all for these pretentious bubbles.

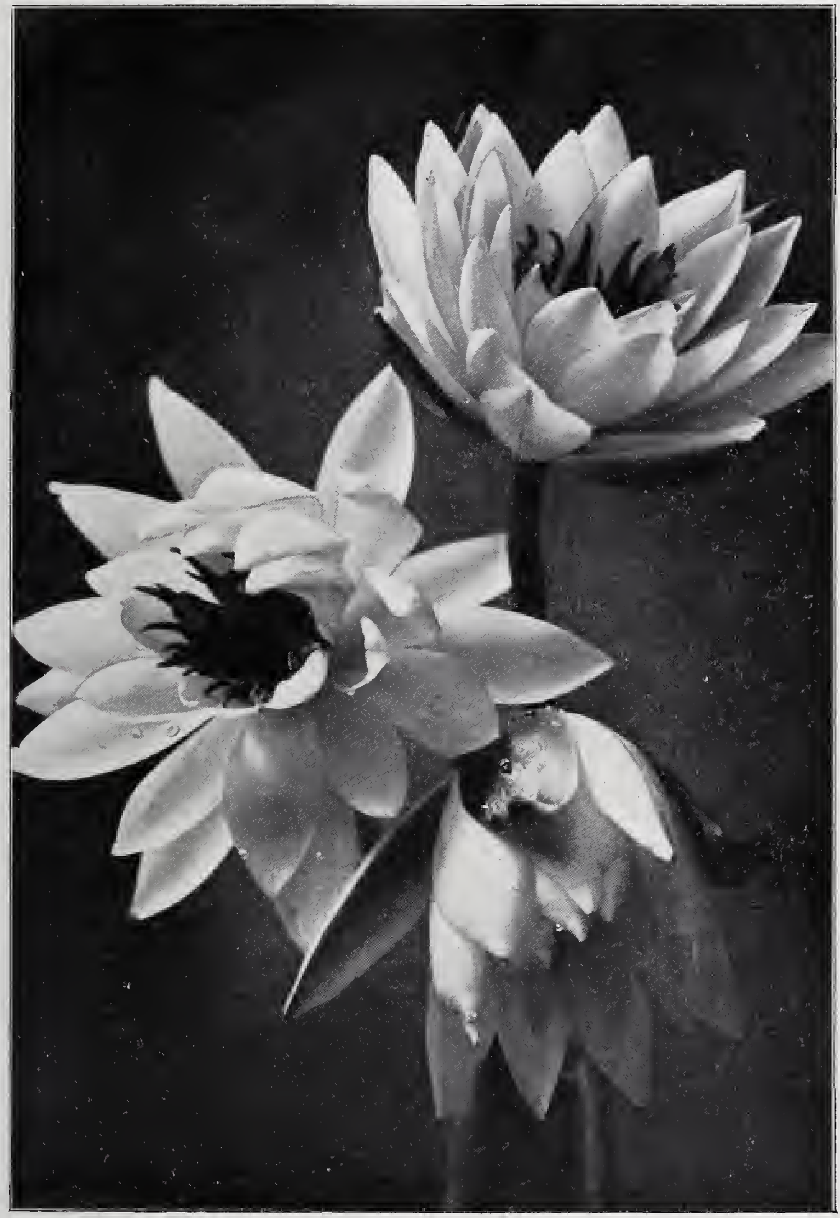
A painter and I sat down one night to select, from the publication referred to, what we considered the best two photos in it pictorially, and what think you they were? Mr. Tingley's "Light Beyond," and Mr. Campbell's "Messengers of Death," and, lo! we found the latter was included in the Technical Section. On the other hand, the very worst in the book — to which we adjudged, too, the wooden spoon — was "A Pond at Weston Green," which seemed to us to possess every ill that photography is heir to; and this to me was all the more regrettable since the producer of that abominable daub *has* done some beautiful things in pure photography and platinotype, and may he renounce false gods and return to the style of his saner days.

There was a time when the great bubble of sharpness enveloped the photographic world, but that has burst, and the explosion thereof seemed to have upset the sanity of some, who have been carried away in the explosion and lost all reason and sense, all tone and texture, those vital and great qualities of photography.

Another bubble that seems to get into the eyes of some of our chemical friends, and which they are constantly playing shuttlecock and battledore with, is the "control in development" question. By all sorts of high-sounding devices they are constantly telling us how they can modify results, and therefore, say they, P is A, or Photography is Art. Now, our good chemical friends are the most respectable of men — the fathers of families, also church wardens — but they have never even yet told us how by stirring up something we can make one specific tone lighter as against another. They give us varied results which have no real bearing on the issue at all; but, until they can tell us how a certain wall (say) is to be made lighter or darker as against a certain other wall, and the rest of the picture to remain in *statu quo*, they can not legitimately deduce P is A, or else they are but logically arguing after the manner of cause and effect of Tenterden Steeple and the Goodwin Sands.

This is a small matter to them, perhaps, but it is of fundamental importance concerning the point at issue, and Doctor Hurter and Mr. Driffield told me it could not be done; and, until one of our friends does it, I shall continue to say P is not A, and add Q. E. D., after the manner of dear old Euclid.

I claim no originality in further destroying these bubbles. I have let them grow



Negative by C. G. Walline, Chattanooga, Tenn.

POND LILIES.

(SECOND PRIZE.)

and grow, unopposed by me for years, to see if they could give us a new and valuable hint of any kind; but are they doing us any good as a body? We have been held up to ridicule by an able artist, Mr. J. Pennell, in one of the leading reviews; by an artist who was a photographer, and I trust the home truths in the perhaps unpalatable article to many have not been forgotten, though the writer went too far to prove his case, but he said many truths that should not be allowed to drop, for it must not be thought he had any ulterior motive. That I don't believe for a moment; the pretensions in framing and daubing would naturally arouse the ire and sarcasm of any good artist, and many artists I know have said similar and worse things than Mr. Pennell enunciated. To many of us his remarks in no way referred; and if any of us wish to gain the esteem of artists, and, in the long run, of photographers as well, I feel sure the abjuration of all these illegitimate and resuscitated "fakes" is the only royal road. And it delights me to find the responsible press of the photographic world has sternly set its face against such humbug.

DR. P. H. EMERSON.

COVER COMPETITION.

We offer $25 for the best suggestion of a cover-design for next year. What we want to get is a bright original idea, and competitors need not strive to send us a fine drawing.

The following are the conditions:

1. All matter to be delivered before October 1, 1900.
2. The design must be suggestive of photography.
3. It must be attractive — that is, when lying on a newsdealer's stand it must draw attention to itself.
4. Not more than two colors to be used in the design.

LITERARY COMPETITION No. 16.

Our literary friends, after the summer rest, should be able to start in with vigor and give us plenty of good practical material for our pages in the winter months. So on October 15 we expect to have quite a bill of fare to sit down to.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

RULES.

1. Write on one side of the paper only.
2. Be brief, sending less than one thousand words, if possible.
3. Never mind style — use the smallest words you know.
4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.
5. Write your name and address at the end of the article.
6. Mark the envelope "Literary Competition."
7. Preference given to practical articles, that is, those that tell "how to do things."

PICTORIAL COMPETITION No. 27.

A very interesting set of prints were submitted in this competition, and the judges expressed great pleasure at the advance made over last year's flower studies. The distinguishing feature this year was a decided aiming at decorative effect which goes to show that the articles that appeared last year on this subject have borne fruit.

The judges were greatly disappointed that not one really good rose picture was sent in, and they hope to see this remedied in another year.

The awards were as follows:

First Prize — W. H. Sargent, St. Johnsbury, Vt.

Second Prize — C. G. Wallim, 107 Payne street, Chattanooga, Tenn.

Third Prize — H. P. Dahlen, 306 South Fourth street, Terre Haute, Ind.

PARTICULARS OF WINNING PICTURES.

First Prize — Made with long focus Poco camera, Cramer Iso. plate, without color screen; stop *f*-64; two minutes' exposure.

Second Prize — Made in May, 1899, 9 A.M., in room three feet from window; bright day; stop No. 16; exposure one minute. Cramer Crown plate, developed with pyro; printed on Aristo latino; telephoto cycle Poco D camera.

Third Prize — Made June 24, 1900, 11 A.M.; light diffused by closely adjoining building; Cramer medium Iso. plate; Ray filter; stop *f*-22; exposure forty-five seconds; developed with pyro; printed on Willis & Clements platinotype paper.

FUTURE COMPETITIONS.

Competition No. 29.—Genre pictures, or pictures that tell a story. Closes September 30.

Competition No. 30.—Snap-shot pictures. Closes October 31.

Competition No. 31.—Landscapes. Closes November 30.

Competition No. 32.—Ray-filter pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given, also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

PRIZES.

First.— Books to the value of $5.
Second.— Books to the value of $2.50.
Third.— Books to the value of $1.
To be selected from our catalogue.

BIG PHOTOGRAPHIC PLATES.

St. Louis, August 10, 1900.

Mr. F. Dundas Todd, Chicago, Ill.:

Dear Sir,— We recently made for Mr. George R. Lawrence, of 2701 Indiana avenue, your city, what we believe to be the largest dry plates ever made. They were 56 by 96 inches, or say 5 by 8 feet, and weighed about 150 pounds each. Our Mr. Hodges writes that the first two which Mr. Lawrence has exposed produced very fine negatives. We thought this might be of interest to your many readers as a news item. With kind regards we are,

Very truly,
M. A. Seed Dry Plate Co.

E. N. Bridges (late with M. A. Seed Dry Plate Company) and S. L. Wells have bought out Charles H. Hovey, dealer in photographic supplies, Rochester, New York.

"I consider John A. Hodges' 'Artistic Landscape Photography,' now appearing in The Photo-Beacon, the simplest, clearest, most satisfying exposition of the subject I have read. The writer seems to understand the value of not saying too much. John R. Coryell,
Cornwall, New York.

Negative by F. E. Monteverde, San Francisco, Cal.

DUCHESS ROSES.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F.R.P.S.

CHAPTER VIII.

CONTROL.— *Continued.*

It is, I think, rarely, if ever, desirable to attempt any pencil or brush work upon the film side of the negative. Improvement of that nature can be much more satisfactorily effected from the back, either upon ground glass, tracing paper, tissue paper, or cepa paper, the object being to obtain a translucent diffusing medium upon which to work. Of the materials named I think perhaps that ordinary tracing paper is as good as any; it must be clean and uncreased. It should not be pasted all over its surface when attaching it to the back of negative, or the uneven marks of the brush will probably show in the print. The brush, charged with paste or cement, should be lightly run round the edges of the negative to the depth of about ¼ inch, and the tracing paper, cut to size, applied. When dry it should present an even surface and be quite tightly strained. Such a surface will afford every opportunity for retouching with either pencil, crayon, powdered plumbago or black lead; the latter should be finely ground, and applied with a stump, or leather dauber. It affords an easy and effective means of lightening any part of the negative that may be found to print too heavily. For strengthening high lights a lead-pencil will generally be found the most satisfactory medium. B, BB and BBBB are the most useful grades. Work of this description requires to be executed with the greatest care and skill, or the remedy may prove worse than the ill which it is sought to remedy. A few simple touches will in most cases be all that is required. Elaborate handwork is neither necessary nor desirable; the mere strengthening of the actual chemical deposit on the negative being all that should be attempted. *If any evidence of handwork be noticeable in the finished print, the result should be adjudged a failure.*

Some few years since I introduced a method of improving faulty negatives which has in my own practice at times proved a most invaluable aid to artistic effect. It depends entirely upon chemical action, and is, therefore, free from the objections which some urge against mechanical methods of improvement.

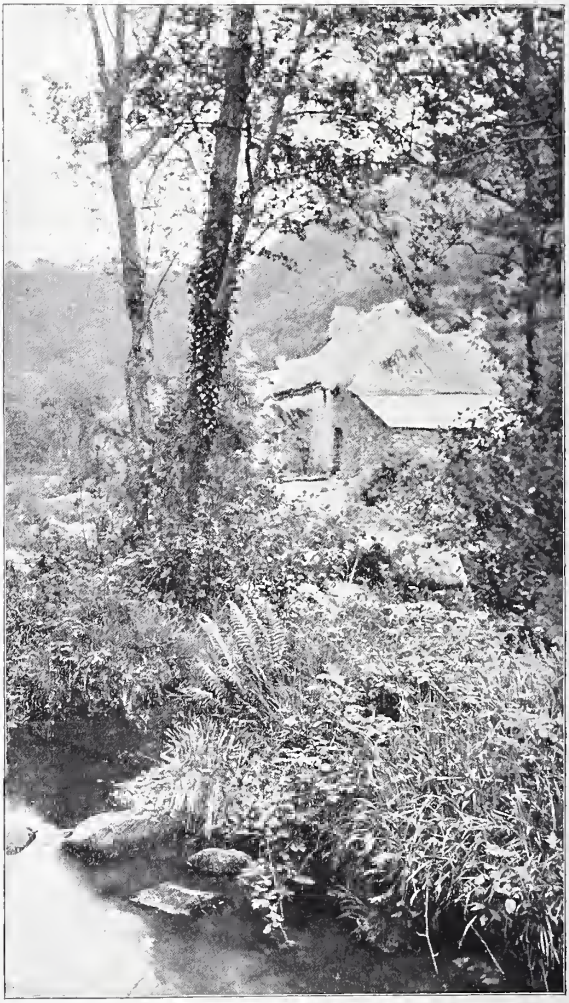


FIG. 23.

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* Copyright, 1900, by F. Dundas Todd.

It is particularly useful in dealing with slightly undertimed negatives in which, although the general effect may be good, the contrast between light and shadow is somewhat too pronounced. When printed without further treatment such negatives often result in the production of prints deficient in half-tone and with harsh shadows and hard high lights. Such a subject as that reproduced in Fig. 23 is an illustration of the kind of print to which I am referring. It is the result partly of underexposure, which has not been sufficient for the deep shadows, and this defect has been somewhat accentuated by want of care in development, the use of a too concentrated solution having given further accession of density to the high lights. The result, from the point of view of the pictorial, is, of course, eminently unsatisfactory, but the method of treatment I am about to describe will be found to afford an effectual remedy for the improvement of negatives which produce such undesirable qualities in the prints made from them.

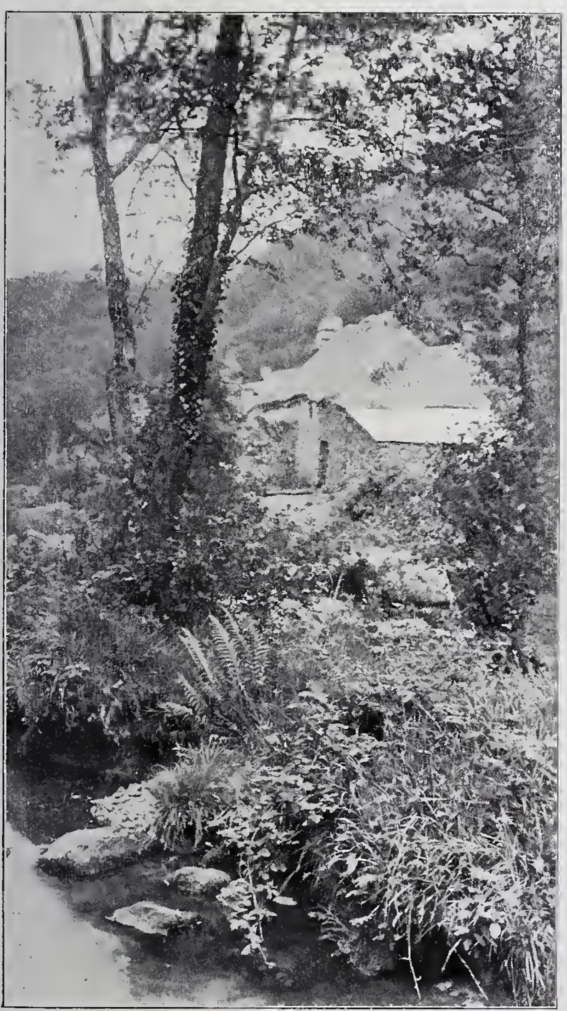


Fig 24.

Let us assume, therefore, that in dealing with a strongly lighted subject, such as that which I have indicated, we have only succeeded in producing a negative in which the shadows print too deeply, and in which the high lights are more or less blocked—a negative, in fact, which yields a result such as that reproduced in Fig. 23.

The negative to be dealt with must first be intensified with the ordinary uranium intensifier made up as follows :

No. 1.

Potassium ferri-cyanide	20 grains
Distilled water	10 ounces
Acetic acid	1 dram

No. 2.

Nitrate of uranium	20 grains
Distilled water	10 ounces
Acetic acid	1 dram

Equal parts of the solutions are mixed just before using. The two solutions keep well separately, but quickly deteriorate when mixed. After a slight washing, the negative is allowed to dry. If the washing is too prolonged the effects of intensification will disappear, and the negative resume its original appearance. Up to this stage no improvement in the printing quality of the negative has been effected, indeed, if we were now to take a trial print, which, for educational purposes we perhaps had better do, we should probably find that we had merely succeeded in making matters rather worse than before. It is true that we may find some improvement in the rendering of the shadow detail, but if we continue printing until we get out the high lights, we shall ultimately find it buried as before. The reason for this is, of course, obvious; under the action of the intensifier the shadows have been gaining in density, but the high lights have also been growing correspondingly opaque. The special utility of the uranium system of intensification will now become apparent. It is well known that the color of the deposit produced by this process can be discharged by the application of a weak solution of an alkali, and this property is turned to practical account by painting over with a camel's-hair brush charged with a weak solution of alkali — ammonia, for example — those portions of the negative which print too hard. This treatment gradually removes the red color, and brings the parts so treated back to their original condition before intensification.

In practice some care and skill is required to carry out the operation successfully. It will be found best to support the negative on an ordinary retouching desk, or a rough substitute. The ammonia or other alkaline solution should be very dilute, so that its action may be slow and well under control, and a glass of clean water, which must be constantly changed as it becomes charged with alkali, and a large mop camel's-hair brush should be at hand, so that the action of the solution may be at once checked. For this reason it is desirable to work close to the darkroom sink, so that the whole negative may be from time to time well washed under the tap. Camel's-hair brushes of various sizes will be found most suitable for applying the solution if the surface to be treated is fairly large, but for small fine work sable brushes are much superior. One great advantage of this system is that if, by want of skill or misadventure, the desired effect is not produced, the negative can be soaked in a weak alkaline solution and brought back to its original condition, and after washing and drying we can carry out the process *de novo*. The operation, though somewhat lengthy to

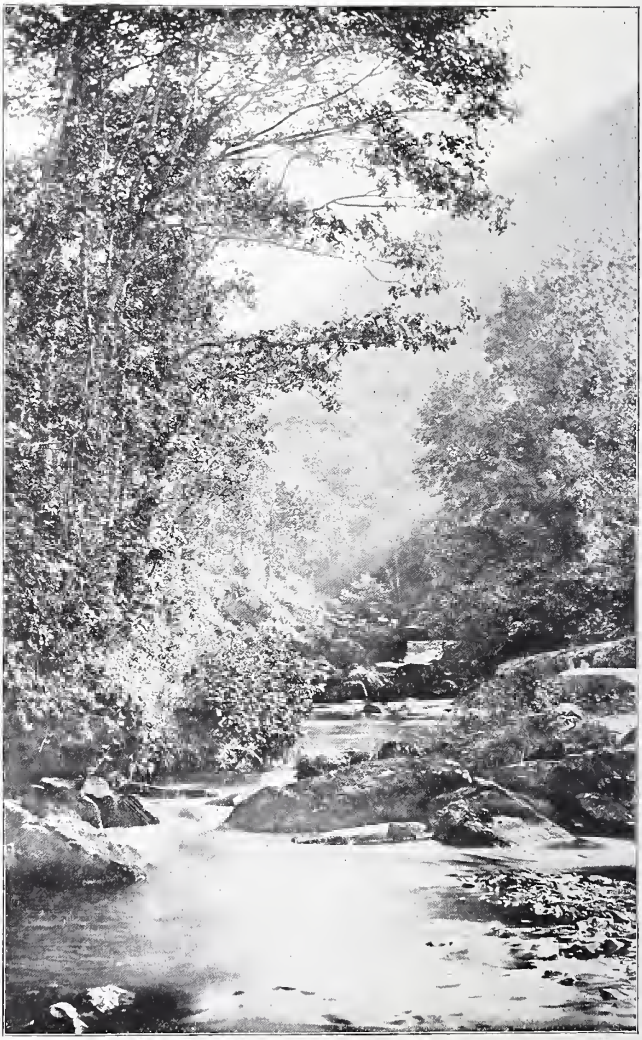


FIG. 25.

describe, is by no means a difficult one to undertake, and I have received the hearty thanks of many photographers, who have given it an unprejudiced trial. It may be that the appearance of a negative so treated will not commend itself to every one, but the very marked improvement in the resulting prints will probably be deemed ample compensation. As I have so often before said, and I venture once more to reiterate the opinion, this striving among photographers after the "perfect technical negative"—and that which in many cases is a false standard of excellence—is really very often an absolute hindrance to advancement. Those who are earnestly striving to secure more truthful and pictorial results than are ordinarily produced by photographic methods are well aware that it is by no means the best looking and "technically good" negatives which enable them to obtain the most artistically and pictorially pleasing results. The negative is simply a means to an end, though many, judging by the way in which they write and talk, seem to regard it as the *ultima thule* of photography. This is regrettable, for the unavoidable limitations are sufficiently numerous without creating avoidable ones.

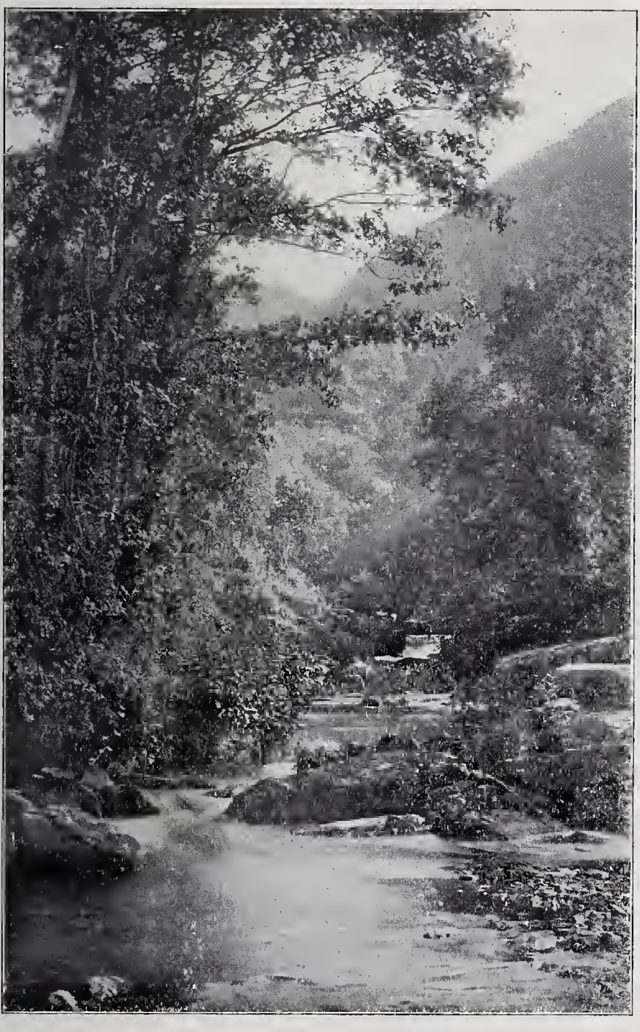


Fig. 26.

Fig. 24 is reproduced from a print taken from the same negative (but after treatment in the manner described) as the first illustration was made from, and I think the improvement effected will be apparent to the most casual observer.

I regard this method as so valuable to the artistic worker that I have ventured to include two other illustrations from the same negative, one before and one after treatment, which are perhaps even more striking in their results. I may remark that in both instances the original print from the untouched negative looks better as a reproduction than it does as a direct print, for the half-tone process gives it a softer quality than it really possesses, and in making the comparison due regard should be paid to this fact. The subject was not altogether an easy one, on account of the lighting coming as it did almost directly from the front, thus causing a very strong effect of light and shade; but apart from the composition of the picture, which is good, its strong feature is the fine contrast of light and shade, and that effect I determined to do my best to secure. This attempt, despite all precautions, was only partially successful, and the best result I could secure from the untouched negative is shown in Fig. 25. As this was so extremely unsatisfactory, I then endeavored to ascertain whether any system of "doctoring" would enable me to secure a rendering more like the original scene, the beauty of which had so impressed me at the time of making the exposure. The negative was accordingly subjected to the treatment already described in detail, with the result that a print was obtained from it which gave me a fairly truthful rendering of the subject.

I doubt not that exception will be taken to the adoption of such methods as those which I have described. But I would inquire of those who would so criticise them whether, when the artistic perception of the photographer enables him to recognize a fault or shortcoming, and a remedy is placed in his hands, it is not mere carping criticism to question its legitimacy and deny its application to the purpose in view?

(*To be continued.*)

EDITORIAL TABLE.

ALMER COE, 65 State street, Chicago, has just issued his first photographic catalogue, which is very complete and handsomely gotten up. It can be had for the asking.

JAMES H. SMITH & Co., 311 Wabash avenue, Chicago, have issued their catalogue for the year. As usual it is complete, and that means it contains descriptions of many articles not found in other catalogues. A postal will get it.

R. H. RUSSELL, 3 West Twenty-ninth street, New York, has just published a couple of books, illustrated by Rudolph Eickemeyer, Jr. One, entitled "Down South," consists of about fifty pictures of darkey life, which are very good indeed and full of human interest. At the price of $1.50 there should be a big demand for the book.

FROM C. P. GOERZ, Berlin, Germany, we have much pleasure in receiving a very excellent picture of a group of army horses with soldiers on their backs leaping over a high wall. It is an enlargement, 15 by 30 inches, made from an original 4¾ by 6½, and close inspection shows every part to be in wonderfully perfect definition. The test is a severe one, for there is great depth of focus necessary in the subject as well as that of the horizontal plane. The original was made with a Goerz Anastigmat, Series III.

RAY-FILTER COMPETITION.

We would remind our readers that all pictures intended for the Burke & James Ray-Filter Competition advertised in June issue of THE PHOTO-BEACON must be in the hands of the firm before the last day of this month.

The prizes offered are exceedingly valuable and our readers should not miss the opportunity of securing one of them if possible.

TRADE NOTES.

MITCHELL'S "Celeritas" developing powders is the name of a new developer just placed on the market by the Standard Chemical Company, Limited, 1016 Cherry street, Philadelphia. It is stated to be a new and original combination of metol and hydrokinone, which works surely, safely and rapidly, gives good density with exquisite detail, and for prints on Velox paper yields rich, velvety blacks and clean whites. The makers claim that it is an "ideal" developer for hand-camera work with films, etc., as it works very rapidly and will not fog. Samples can be obtained by sending two 2-cent stamps to the manufacturers.

THE Bausch & Lomb Optical Company, Rochester, New York, is again adding to its lens-making plant. The present building has a floor area of 138,000 square feet. The new wing is 96 feet long and 22 feet deep, the whole having a floor area of nearly 40,000 square feet. The Roebling Construction Company, builders of the Brooklyn bridge, have the work in hand, their fireproof construction being employed throughout. As the larger wing will be used for the grinding and polishing of photographic lenses, it is constructed with the utmost solidity, the piers of which the walls are composed being three feet thick at their bases. Huge windows occupy the spaces between the piers, admitting an abundance of light. The

Negative by H. P. Dahlen, Terre Haute, Ind.

TIGER LILIES.

(Third Prize.)

floors are especially designed to prevent vibration, being tested to 4,000 pounds per square foot, or a total weight for the building of 160,000,000 pounds. About half of the smaller wing will be occupied by vaults for the storage of valuable material, such as optical glass.

The Indiana Association of Photographers have just issued the list of prizes to be awarded at their seventh annual convention, Winona Lake, Indiana, June 24 to 28, 1901. Particulars from George J. Parrott, Warsaw, Indiana, the Secretary.

THE NATIONAL CONVENTION.

The Twentieth Annual Convention of the Photographers' Association of America was held at Milwaukee from July 23 to 27 inclusive, and proved to be one of the most pleasant and successful in the history of the association. S. L. Stein, the president, learned early in the game that if there was to be any honor in his office he would have to work for it, and work he certainly did, and the result was one of the biggest gatherings yet. The first day of the meeting was devoted to completing arrangements at the hall, and to receptions by the Wisconsin Association and the Milwaukee photographers to visiting members at their hotels.

On Tuesday in a much overcrowded hall, although a large one, the Hon. D. S. Rose, mayor of Milwaukee, welcomed the convention to the city. He was followed by President Stein. His address was very much to the point, and among other things he urged each photographer to use his own brains.

Mr. W. I. Scandlin, editor of *Anthony's Photographic Bulletin*, then gave a careful résumé of the progress of photography during the past five years.

He was followed by Professor Beck, of Cincinnati, who talked very practically on "What are the Principles of Beauty in Art." The professor has in the last few years learned more of the needs of photographers and is now a really interesting lecturer and a good teacher.

In the afternoon the McDonough process of color photography was demonstrated.

The program of Wednesday opened with a paper on "The Copyright Question of Today." Professor Griffith, of Detroit, followed with one of his popular talks.

In the afternoon the members visited the Layton Art Gallery, when Professor Eldridge, the Curator, lectured on the pictures.

Thursday's program began with selection of place of meeting for next convention, Detroit being the unanimous choice.

Then followed the election of officers with the following result:

President, E. B Core, New York.

First Vice-President, D. D. Spellman, Detroit.

Second Vice-President, H. S. Klein, Milwaukee.

Secretary, J. G. Nussbaumer, Buffalo.

Treasurer, F. R. Barrows, Fort Wayne, Indiana.

In the afternoon Mr. Ives demonstrated the Kromskop process in color photography.

The Friday meeting was devoted to a paper on "Lighting" by Professor Beck and an address by Professor Griffith.

The following are the prize awards made by Messrs. M. J. Steffens, J. C. Strauss and F. M. Somers.

GRAND PORTRAIT CLASS.

First Prize.—No. 27, Moore and Stephenson, Atlanta, Ga.; life size figure bust.

Second Prize.—No. 62, Dudley Hoyt, Rochester, N. Y.; gold medal.

Third Prize.—No. 65, J. E. Giffen, Wheeling, W. Va.; silver medal.

Fourth Prize.—No. 97, E. C. Dinturff, Syracuse, N. Y.; bronze medal.

GENRE CLASS.

First Prize.—No. 40, E. S. Curtis, Seattle, Wash.; figure head.

Second Prize.—No. 16, G. Moses & Son, New Orleans, La.; gold medal.

Third Prize.—No. 57, Baker Art Gallery, Columbus, Ohio; silver medal.

MINIATURE CLASS.

First Prize.—No. 37, I. Benjamin, Cincinnati, Ohio; gold medal.

Second Prize.—No. 10, D. Rosser, Pittsburg, Pa.; silver medal.

Third Prize.—No. 63, Dudley Hoyt, Rochester, N. Y.; bronze medal.

Fourth Prize.—No. 17, G. Moses & Son, New Orleans, La.; diploma.

CLASS A.

First Prize.—No. 59, Elias Goldensky, Philadelphia, Pa.; gold medal.

Second Prize.—No. 73, A. F. Proctor, Huntington, W. Va.; silver medal.

Third Prize.—No. 115, W. M. Morrison, Chicago, Ill.; bronze medal.

Fourth Prize.—No. 41, E. S. Curtis, Seattle, Wash.; diploma.

CLASS B.

First Prize.—No. 49, E. E. Dexter, McKeesport, Pa.; silver medal.

Second Prize.—No. 74, A. F. Proctor, Huntington, W. Va.; bronze medal.

Third Prize.—No. 110, C. S. Bateham, Norwalk, Ohio; diploma.

CLASS C.

First Prize.—No. 30, Louis Schreiber, West Bend, Wis.; silver medal.

Second Prize.—No. 113, J. F. Denninger, Neenah, Wis.; bronze medal.

Third Prize.—No. 84, A. L. Jackson, Tacoma, Wash.; diploma.

LANDSCAPE CLASS.

First Prize.—No. 104, H. C. Meyer, Boise, Idaho; silver medal.

Second Prize.—No. 28, J. H. Field, Berlin, Wis.; bronze medal.

Third Prize.—No. 67, Robert Wilkinson, Montpelier, Vt.; diploma.

MARINE CLASS.

First Prize.—No. 64, Charles E. Bolles, Brooklyn, N. Y.; silver medal.

Second Prize.—No. 11, H. R. Fitch, San Diego, Cal.; bronze medal.

Third Prize.—No. 23, H. H. Morrison, Seattle, Wash.; diploma.

SOME CONVENTION NOTES.

President Stein was presented with a beautiful cut-glass punch bowl, filled with American beauty roses.

The one noticeable feature of the exhibits this year was the individuality shown by very many of the exhibitors.

Burke & James, Chicago, James H. Smith & Co., Chicago, E. & H. T. Anthony, New York, and R. J. Golsen, Chicago, had very complete exhibits of general supplies.

EXHIBIT OF COLUMBIA PHOTO PAPER COMPANY, AT NATIONAL CONVENTION.

Among paper manufacturers were the American Aristo Company, Nepera Chemical Company, Eastman Kodak Company, Columbian Photo Paper Company and F. M. Whipple, trade agent for "Uko."

All the leading manufacturers were well represented. M. A. Seed Dry Plate Company, G. Cramer Dry Plate

Company, Hammer Dry Plate Company, Lovell Dry Plate Manufacturing Company, Columbian Dry Plate Company, New York Dry Plate Company and Standard Plate Company were in evidence.

Haller-Kemper Company had an interesting exhibition of their specialties, including photographs on silks and cottons by means of Sensitol.

Bausch & Lomb Optical Company, Rochester, and C. P. Goerz, New York, had representative lens exhibits.

A. H. Spurr, Creston, Iowa, has a decided novelty in an odorless and smokeless flash-light machine. The light is produced by burning gas in a glass jar. The pictures shown as having been made by it are very good.

The H. Lieber Company had a big collection of frames.

L. W. Seavy and Rough & Caldwell, New York, had interesting background displays.

Willis & Clements had a popular corner with their platinotype display.

Other exhibitors were Henry Reimers, Sweet, Wallach & Co., Zimmerman Brothers, Clipper Camera Manufacturing Company, James Inglis Company, Pin-Lock Medallion Company, Scott, Harris & Co., L. H. Cohen, Sunart Photo Company, Carl Ernst & Co., Heinn Specialty Company, Ives-Kromskop Company, Golden Novelty Manufacturing Company, Carl Rugge, Columbian Photo Paper Company, Fishel, Nessler & Co., International Photo Color Company, J. F. Decker & Co., Wayne Chemical Company, Deardorff Optical & Camera Company, Manhattan Optical Company, London Chemical Company, Gibson & Co., Multiscope & Film Company, Excelsior D. P. Company, Globe Scenic Company, Marton's Photo Oil Paints, Taprill, Loomis & Co.

A SIMPLE METHOD OF SQUEEGEEING GLOSSY PRINTS.

A few days ago I received a letter asking information on squeegeeing prints, the writer saying she had tried everything she had ever read about and still lost a great many prints, as they failed to leave the ferrotype plate. When a prize was offered for an article on this subject I was tempted to send in my experience then, but my method was so simple and I had read so many things that sounded all right I did not do so, but will do so now and send in a method which does not fail. I have a piece of plate glass about 14 by 20 inches. This I procured of a glazier, being a piece of a broken store window and costing me 25 cents. I wash and clean with soap and water. Next I take a small piece of cotton cloth and dip in alcohol and rub thoroughly. I then take a piece of tallow candle and rub over clean side of glass. I find the sperm will adhere only in places, but the idea is to get it all over good. If it does not stick, it does not matter. Next I take a clean piece of muslin and rub all of the sperm from glass, and as it is rather hard to get off, when done the plate is polished. I now take wet prints, place face down on glass, and with a print roller I roll all the water out, being careful to squeegee all the air bubbles out. I next set them where the air will dry them quickly. If it is in the sun it does not matter. When they are dry they rarely fail to leave the plate and often do so spontaneously; and if for any cause they do not do so, I take a sponge and dampen it and pass over the back of prints and leave for a minute or so, then they will all come up good and retain their gloss, as the dampness is not enough to swell the gelatin on the paper, for this refers to gelatin paper only.

Mary E. Flenoy.

The Lansing (Mich.) Camera Club announces to all amateur photographers that the clubrooms at 113 Michigan avenue East are at their disposal when visiting the city. The club's officers are: President, O. T. Allen; vice-president, Miss May McKibbin; secretary, Miss Mae Wagner; treasurer, F. J. Hopkins.

PHOTO-BEACON EXPOSURE TABLES.

Now ready, new edition — thirtieth thousand. Revised table of plate speeds; many important changes. Price, 25 cents.

ART COMPOSITION.

The principles of composition and methods of acquisition remain the same wherever art is found. Whether the artist be born or made, a knowledge of the principles and an application of the methods will be beneficial. To many amateurs, however, who lay little claim to natural ability and who have had meager opportunities for education, the technicalities of art are lifeless and learned expositions of the subject only discouraging. While the production of an artistic picture has its difficulties, real and imaginary, much of the amateur's trouble lies in the fact that the instruction given is a little beyond his grasp. The subject is approached from the unknown side, by the use of words and phrases not fully appreciated, instead of appealing to his experience and leading on from what he knows or has acquired.

The subject of artistic production is presented before he has acquired the ability to distinguish a picture from a mere photograph. We would certainly criticise a system of instruction which in literature would require an essay or composition before the pupil had learned to read ; yet in art, that is what we are asked to do.

If "art is art wherever found," why should not its acquisition be facilitated by the same system of instruction whether in literature or in photography? How did we learn our language? Why not learn our photography in a similar manner? Every one is familiar with this method. It is not necessary to point out the different steps taken in making the acquaintance of the sentence, its analysis, grammatical construction, the meaning of its words, etc., before we are even expected to write ; and how many polished specimens of literature were reviewed before a composition was attempted. Now let us learn to recognize pictures and learn to read them before we attempt their composition.

We unconsciously, to a greater or less degree, learn to interpret nature. We read the common things about us. The small child can tell by the tone of the growl whether his dog is at play or at dinner ; by the position or attitude of his cat whether she is seeking a caress or a mouse. Without consciousness of reasoning he infers by tone and position the mood of his pets. A glance from our window and we say the wind is blowing, yet we have not seen the wind, we have inferred this from its effects of bending boughs or flying dust. We like a person or dislike him at first sight because we have interpreted some expression, position, or characteristic to his advantage or disadvantage. By these effects we have read his character. By a study of these effects we reason out the truth, and by reproducing them we impart the information to others.

The beginner in photography is familiar with these simple scenes about him ; why should he not begin here and, as he grows in his power to interpret nature, lead on to more difficult and more expressive composition? A picture must convey to the observer something more than a photographic reproduction of lines and curves ; so do not attempt those scenes which you can not interpret or which are not capable of interpretation. Rather deal with the simple. One of the greatest difficulties in photography is to know what to leave unphotographed.

Take your dog and cat, but get more than dog or cat — get some characteristic attitude so that even a child as he looks at the picture will say, "At play," "Angry," or "Looking for a mouse." If a person is the subject, let him be at work, at rest, pleased, or angry. If a landscape, study to produce some effect — windy, dark, blustery, bright, clear, quiet. These effects are simple, but they are the beginning of expression, and, as in language, we must learn to express before we can attempt *artistic* expression.

Observe that these effects not only express ideas but emotions as well. Along with the idea, or even preceding it, comes the feeling which can be clearly defined. Much of the artistic depends upon this suggestion of emotion; this imparting of sympathy, pleasure, or even pain, by effects. We see a man cruelly beating his faithful horse, and there is an emotion aroused within us. Reproduce this scene so as to arouse the same emotions in the observer and we have a picture. It is not the simple peasant that makes "The Angelus." The figures have something more than form; they carry a spiritual essence. And to only the person who can read this sentiment is it art. To appreciate you must catch the spirit of its composition.

As in literature we read between the lines — the words and phrases conveying something more to us than the dictionary definitions — so in nature we should see something more than lakes and trees. Landscapes have their effects if we can but read them. They may be exciting, soothing, pleasing or melancholy — in fact, express moods as various as human feelings; and just as a love for poetry may be cultivated, so may an appreciation of landscape be developed. But to appreciate we must be able to interpret and respond to the appeal to our emotions.

In portraiture effects are even more prominent than in landscape. We read character by effects and designate the individuals about us according to their prominent traits. We speak of the firm mouth, square jaw, eagle eye, high brow, as characteristic features ; and if we are able to read further we find that these but indicate the elements from which strong types are formed — the artistic ideals of noble life.

Art is the expression of these moods of nature and types of character — the proper selecting and placing of elements to give naturalness and sentiment. A picture must be more than a photograph. The figures must by their position express some idea which appeals to the observer. If a picture does not appeal to us — if we can not get in sympathy with it from our own standpoint — it is not artistic. We are not able to read it. But we should not be hasty in pronouncing upon it until we know whether the obscurity is in the picture or in us.

After spending years in learning to read and in the study of books, there still remains much of literature that we do not pretend to understand without careful consideration. Yet without study or preparation of any kind we not only pretend to appreciate pictures but attempt to make them. In the light of this condition our surprise should be, not at the absence of art, but that the artistic could be produced. It is only the exceptional genius who can plunge at once into production. The question therefore is, whether we will learn art without rules, by blundering experience and accident — by attempting to make pictures before we are able to read them or recognize the elements and rules of composition, or whether we will take the approved methods of procedure found best in all art? The answer can not be doubtful. The true way is to submit to the rules and methods necessary as a preparation. Develop the ability to get in harmony with nature in her various moods, and when we feel the sentiment of a scene before us, seek to discover the elements which compose it and their arrangement that it may be reproduced. If we have not the ability to enter into the spirit of a view, to penetrate deep enough to get at the natural facts composing it and their ordering, we can not hope to produce pictures which will influence the observer. We fail as artists.

M. L. BISHOFF.

Negative by Dr. C. E. Dampier, Crookston, Minn.

SWEET PEAS.

OVAL GUIDES FOR THE ROBINSON REVOLVING PRINT-TRIMMER.—HOW TO MAKE CHEAPLY.

The oval shape for photographs has again come into vogue, and doubtless many amateurs have been puzzled how to make their prints in this form, giving them a smooth edge and at the same time doing the work expeditiously.

Knives and scissors are all makeshifts. The only successful means is what is known as the Robinson revolving print-trimmer, an instrument consisting of a small sharp-edged metal wheel revolving on an axle, set in one end of a cylindrical piece of metal, the other end of which is held loosely in a metal handle by means of a metal collar, leaving it free to revolve and yet not free to drop out. It may be likened to a caster, the socket into which the caster fits being in the handle and the wheel of the caster having beveled edges, making its circumference a circle of sharp metal.

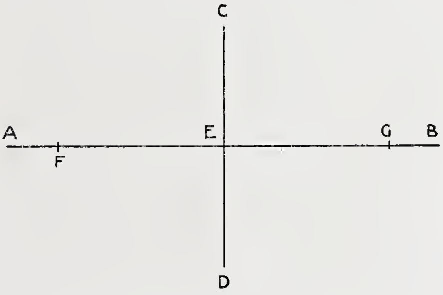
To use this instrument, a metal guide, preferably of brass, with an opening in the center of the required dimensions, is necessary. The print is laid face up on a sheet of heavy glass, the guide is placed in the proper position on it, and held firmly in place, the little wheel of the trimmer is placed flat with the inside edge of the guide, and the trimmer is revolved about the form by means of the handle, keeping the flat side of the wheel toward the inside edge of the guide.

The professional photographer has many sizes of these brass oval guides, but alas! they come too high for the purse of the average amateur. The purpose of this article is to point out how the amateur may make his own oval guides, at a cost to fit his pocketbook.

The necessary tools are a bracket saw (the writer uses a hand saw which cost 18 cents; any amateur possessed of a foot-power scroll saw would be in clover), a dozen saw blades (12 cents), a half-round file (10 cents), a small drill, several cylinders of wood an inch long, sawed from a broom-handle or curtain-pole, some very fine emery, and some Le Page's glue. In place of the last three, a cylindrical whetstone of fine grain might be used, if the amateur already possesses one.

You must first decide on what sizes of ovals you want, measuring their greatest length and width, then select for each a sheet of brass at least an inch wider or longer, 1½ inches would be better. Sheet brass, gauges 16 and 17, are best adapted to this purpose, having a thickness, respectively, of $\frac{1}{20}$ and $\frac{1}{30}$ of an inch (estimated). A 5 by 7 piece of 17-gauge brass can had from any of the brass trunk-check manufacturers or machinists' supply houses in Chicago, for 15 cents.

Decide on the exact size the oval is to be and then plot on a sheet of paper an oval $\frac{1}{32}$ inch wider and longer (the trimmer cuts a little smaller than the exact size of the guide), using the following method, familiar to every schoolboy:



Draw a straight line A B the length of the desired oval. At right angles to this and so that the centers of both lines will be at a common point, draw a line C D the width of the desired oval. Then C E should be equal to E D, and A E equal to E B. Now with a ruler, or a piece of paper, take the distance A E as a radius and swinging from the point C, find where it will intersect the line A E, and mark that point F. Measure the distance F E on the line E B, from E, and mark it G. A F should now equal G B.

Take a piece of firm string and tie a knot near one end. At a distance from that knot equal to A B, tie another. Then stick pins through these knots. Place the paper on a wooden support and drive in the pins (still stuck through the knots) at the points F and G.

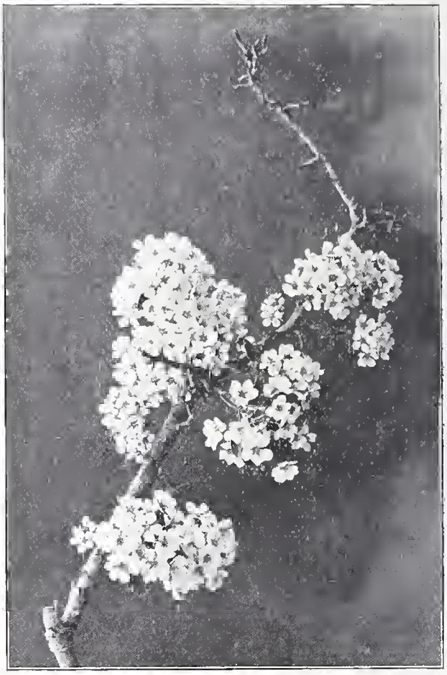
If, now, a scratch awl is pressed upward toward C against one side of the string and moved through the points A C B, keeping the string taut, it will describe one-half of a perfect oval through said points; if pressed downward, on the other side of the string, toward D, and moved in the same manner, it will describe the other half. Should the string not quite allow the awl to reach to the points C and D, increase the distance between the knots slightly until it does.

Now with the scratch awl lay off the same lines on the sheet of brass, making sure the point E is at its center. At F and G drill holes just large enough to admit the pins. If your drill is too large, drill almost through the sheet and make the holes for the pins with the point of the awl so that the pins fit snugly. Then draw the oval, making sure the awl "bites" deeply and, in going over it, that it makes but one line.

When oval is drawn, saw can be inserted at either F or G, or, better still, a hole can be drilled nearer to the edge of the oval. Saw as close to the line as possible, to avoid much filing later on, holding the plate firmly on a horizontal surface with end of plate being sawed just projecting over the edge. When oval is sawed, smooth with the half-round file flush with the design, being careful to file at right angles to the plate. You will be surprised how readily it can be filed to the shape laid out.

In the meantime, the cylinders of wood should have been coated with glue and then rolled in emery. If coated with varnish, first remove it so that the glue will adhere. They should be given about twenty-four hours to dry thoroughly. With one of these cylinders so prepared, smooth off the edge of the oval, holding the side of the cylinder at right angles to the plate and changing to a fresh surface or to a fresh cylinder as often as necessary. A fine-grained whetstone might answer for this purpose, but I would prefer the wood coated with emery, for you can use cylinders large in diameter on the sides of the oval and other smaller ones at the ends, thus giving a more perfect edge to the oval.

The guide can now be polished all over, still using one of the cylinders, and then washed and scoured with sapolio, which gives a nice frosted effect to the surface. If just a little care has been used, you will now have a guide that will compare with any you can buy. The saving will be still more apparent when you come to make up a half dozen of various sizes.


Negative by J. W. Traver, Newark, N. J.

PEAR BLOSSOMS.

One skilled in the use of the soldering iron can reduce the expense still further by drilling just slight depressions at F and G and soldering the heads of the pins in place. By this means the portion cut out may be used as the plate from which one of the smaller ovals may be cut. This end might also be attained by cutting the oval out of cardboard and using this as a means to trace it on the plate.

The string used in drawing the oval should be flexible and yet not elastic, that it may not give while drawing the oval, thus producing a wavy line. The knots should move freely about the pins.

It is best to trim the prints while wet, just before pasting, as it is a well known fact that photographic papers expand when wet, and more so in one direction than in the other.

E. G. STOCKERT.

INTENSIFICATION.

All who have a bottle of developer should have a bottle of intensifier; its importance is about as great and can not be overestimated.

If you have a print that is not satisfactory, nine times out of ten intensifying will improve it.

Plates overexposed and plates with a proper exposure but underdeveloped are the ones to intensify.

An overexposed plate on being developed and fixed looks flat; there is no contrast; everything is there, but it will not make a good print. If such a negative has not been developed too far to try and get density or contrast, intensify it after you have made a print from it, then note the difference before and after. It will cause you to hunt up all your poor negatives and intensify them.

If the plate is underexposed — that is, if detail is lacking — there is no use to try intensifying, for you can not get what is not there. If underexposed, it is already too dense, so leave it alone.

There are a number of formulas for intensifiers and a number of intensifiers for sale.

I very much prefer the cyanide of potash formula, though it contains cyanide of potash — a most deadly poison. See that you keep it out of other people's way, and always remember when you use it that it is *poison*, and look to your hands that they have no cuts or sores on them and you will get along all right. I prefer this intensifier because it builds up the negative so strongly. Prepare as follows:

A.

Mercuric chloride	¼ ounce
Water, hot	5 ounces

B.

Potassium bromide	¼ ounce
Water	5 ounces

Mix A and B and label "No. 1."

C.

Silver nitrate	¼ ounce
Water	5 ounces

D.

Potassium cyanide	¼ ounce
Water	5 ounces

Add D to C slowly.

A white precipitate of silver cyanide will be formed. Continue to add the D solution until the C solution is nearly clear. This will require about 4 ounces of the D solution. Do not filter this solution. Label "No. 2."

Bleach the negative in No. 1 till all the dark parts are whitened and the image stands out plainly in black. The success depends upon the amount of bleaching you do. Practice on a few negatives that are worthless until you find about how much to bleach in order to get the intensification you wish. When the negative is sufficiently bleached wash for a moment or two, then immerse in No. 2. It will at once turn brown — rock the tray for a few moments and it will soon get an even blackness, the same as it had before you began on it. See that there are no traces of white on either side of the negative; if there are on the back or glass side, put it back in No. 2 a while longer; when blackened on both sides wash for an hour, then dry. If it is not dense enough after removing from No. 2 wash a few moments and then bleach a second time. Do not leave it too long in No. 2, for it will reduce it.

Another excellent intensifier is made as follows:

Make a saturated solution of bichloride of mercury in water, also the following solution:

Iodide potash	1¼ ounces
Water	6 ounces

Pour some of the mercury solution into the iodide of potash solution and a red precipitate will be formed. Continue to add mercury till the red precipitate will no longer be formed by stirring. Do not add more mercury than just enough to dissolve the red precipitate. If you should get in too much mercury add a little more iodide. Now add one ounce of hyposulphite of soda and add enough water to make 20 ounces.

To use, add two or three parts water, according to the amount of intensification you wish to get. Immerse, flow or brush with a soft brush or tuft of cotton this solution on the negative till you get the amount of density you wish. If it gets too dense place it in a hypo fixing bath, which will reduce to just where you want it, then wash well. If you intensify after developing be sure to wash well after fixing before intensifying, for if there are any traces of hypo it will stain the negative.

With this intensifier, as well as with some others, if, in printing, the negative is much exposed to the sun it will gradually grow denser; but if, after washing for a half hour after intensifying, you place the plate in any of the ordinary plate developers for a few moments and then wash for an hour the intensity will not alter but will be permanent.

This intensifier is probably to be preferred to any of the two solution intensifiers, as it saves half the work and you can see just what you are doing.

Local intensification is intensifying a part or parts of a negative to bring out the details in the shaded parts, by applying, with a fine brush, the intensifier to that part only which prints too dark. "Hall's Intensifier" will be found to give good satisfaction to those who wish to buy their intensifier ready for use. Wash the plate after local intensification the same as if the whole plate had been intensified.

Local intensification can also be done by applying indigo blue moistened with gum water and applied to the glass side of the negative with the finger or tuft of cotton.

Intensification can be done in daylight, but perhaps it would be well to keep out of the sunshine. W. MARSHALL.

ARE your readers acquainted with the fact that, if gelatin prints are given a formalin bath just before final washing, they will take on a beautiful glaze on the ferrotype plate without treating the plate with beeswax, paraffin, or anything but washing? Such a polish is far nicer and will not look messy like a wax polish.

I don't claim the idea as original, but I thought I would mention it, as some may not have come across it.

G. H. OTIS.

FLASH-LIGHT PORTRAIT BY C. L. MONEY.

PORTRAITURE BY FLASH-LIGHT WITH FIXED-FOCUS CAMERA.

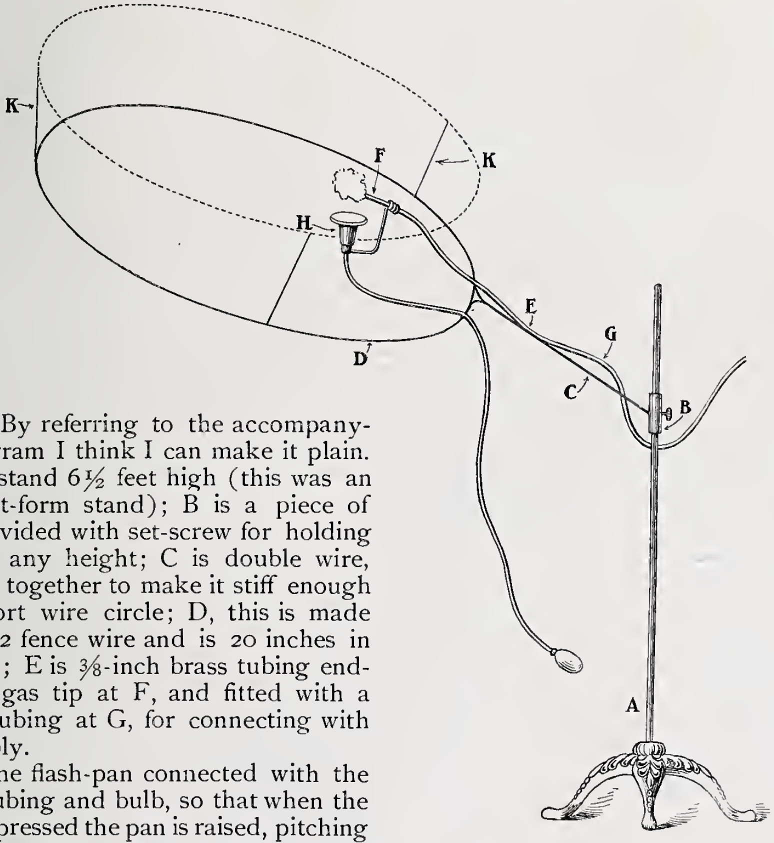
Many amateurs having to work during the day may be able to pursue their hobby at night by the aid of a few simple accessories, which I will endeavor to describe.

THE CAMERA.—Any fixed-focus camera will answer. It will be best if it is not too short a focus, however; for your auxiliary lens, one from an old pair of spectacles will do. It should have a focal length of about thirty inches. (This will of course depend upon the size head you wish to make.) You can get a trial lens of an optician for about 25 cents, which will be better. Fasten this lens over the lens opening of your camera with three drawing pins, and if you have used a lens of 30-inch focus objects *that* distance in front of your camera will be sharply defined upon the plate. You can use a small table for a camera stand, but if you have a tripod get three screw-eyes and screw into the legs of your tripod, on the inner side, about eighteen inches from the top; into these fit the hooked ends of a T of No. 12 fence wire; this will make it rigid and more easily moved about.

BACKGROUND.—You will need a large

ground, at least 6 by 8 feet. Five yards of cheap black sateen, cut in the middle and the edges sewed together, will give a good black. This may be further improved by adding a light for the shadow side of the face with a light-brown crayon. The sitter may be posed in a doorway or in the center of a large room, and the wall will be sufficiently out of focus to give a satisfactory background.

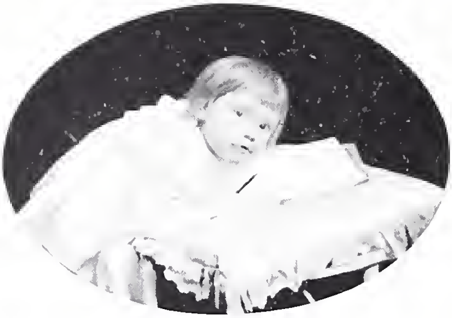
Flash-lamp.— This is the important feature, so I will describe the one I have made. By referring to the accompanying diagram I think I can make it plain. A is a stand 6½ feet high (this was an old skirt-form stand); B is a piece of tube provided with set-screw for holding light at any height; C is double wire, soldered together to make it stiff enough to support wire circle; D, this is made of No. 12 fence wire and is 20 inches in diameter; E is ⅜-inch brass tubing ending in a gas tip at F, and fitted with a rubber tubing at G, for connecting with gas supply.



H is the flash-pan connected with the rubber tubing and bulb, so that when the latter is pressed the pan is raised, pitching the powder into the gas flame. Over the circle D is stretched a disk of white muslin; this is to soften and blend the light. About eight inches above this I have another wire circle similar to D, held by wires K K K. Between the upper and lower loop of wire I have a black cloth curtain to prevent the light shining out at the sides and reflecting from the walls of the room. To prevent sparks from the flash powder falling and burning the cloth on D, the cloth should be dampened; this will also allow the light to pass through more readily.

Now you are ready to begin. Put one large thimbleful of powder into the lamp, attach to gas supply and light the gas at F. Pose the sitter, measure thirty inches from the face and bring the front of camera to this point; turn out all other lights in the room except that coming from your flash-lamp. Now, by sighting over your camera you can see effect of your lighting; moving your lamp to either side or raise or lower it until you see the result you wish. Set your shutter for time and open it. Do not be in a hurry here, for the gas flame will not affect the plate in half a minute or so. When the expression is to your satisfaction give the bulb a quick squeeze, then close your shutter and the thing is done.

Special Points.— The arrangement



FLASH-LIGHT PORTRAIT BY C. L. MONEY.

of flash-pan which I use is part of a Luxa flash-lamp, but in the absence of this of course any mechanism which will throw the powder into the flame would answer. Use any of the explosive flash-powders; of course one which produces the least smoke will be the best for this work. Never pour the powder directly from the bottle into the pan, and never attempt to fill the pan while the gas is burning, unless you are looking for trouble.

The amount of flash-powder needed will, of course, vary with the distance of the lamp from the sitter, and the nearer the lamp is to the sitter the softer will be the lighting.

By setting your camera two or three inches farther away than the length of lens focus the resulting negative will be slightly out of focus, which is a very good substitute for retouching.

If the shoulders appear too large in your picture it can be remedied by having your camera a little too high and tipping it down a little in front.

I have left one very important thing to the last in order that it may be emphasized, and that is get a copy of "Artistic Lighting," by Joseph Inglis.

C. L. MONEY.

THE GRAND PRIX.

KODAK EXHIBIT AT THE PARIS EXHIBITION RECEIVES HIGHEST POSSIBLE HONORS.

The exhibit of the Eastman Kodak Company has been awarded the Grand Prix at the Paris Exhibition. The receiving of the Grand Prix is no empty honor, for it places the company above competition, "hors de concours," as the French put it, at all future Parisian exhibitions. At the Chicago fair all creditable exhibits received the "highest award," probably 90 per cent of the exhibitors having it conferred upon them. At Paris, however, matters stand differently. The highest and most sought for award is the Grand Prix, then come the gold medal, silver medal, bronze medal and "honorable mention" and nothing, in the order named.

No other American manufacturer of photographic apparatus or materials was awarded the Grand Prix, nor did any English manufacturer receive a like award. The Kodak people have every reason therefore to feel gratified at their success in eclipsing all other competitors for exhibition honors.— *Rochester Democrat and Chronicle.*

BOSTON, August 3, 1900.

Editor of THE PHOTO-BEACON, *Chicago, Ill.:*

DEAR SIR,— Referring to your July, 1900, number, on the first page I notice that you make some comment on a postal camera club. Perhaps you may not be familiar with the fact that there has been such an organization in existence since 1881. The headquarters at present are located at Washington, and Mr. G. A. Brandt, of 631 Maryland avenue, S. W., Washington, D. C., is the secretary, who could give you all of the information concerning this.

It is a very successful club, numbering among its members some who do very superior work. He can supply you with a copy of the constitution and by-laws of this organization, and it might be of some advantage to you to print this so as to give the prospective members an idea of what the organization is like. Those of us who belong to it feel that it is one of the most helpful organizations that we have ever had anything to do with.

At present it is made up of members from Boston, North Adams, Holyoke, Syracuse, New York city, one or two cities in New Jersey, Washington and Baltimore. I am, yours very truly,

C. S. LUITWIELER.

Home Hobbies, Arts and Crafts

COPYRIGHT 1900 BY F DUNDAS TODD.

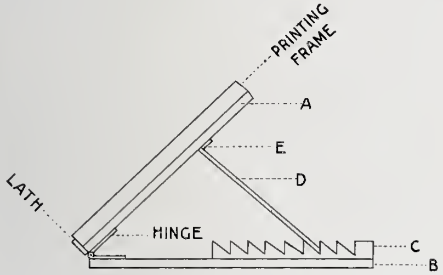
CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER.

INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

HOW TO CONSTRUCT A PRINTING-FRAME EASEL.

An easel of this kind will be found quite a convenient little article for printing. It keeps the frame square to the sun, insuring even printing, a point especially desirable in quick printing papers, as Velox, Dekko, etc.

First get a board 6½ inches long by 5½ inches wide and ¼ inch thick — a side of an apple box is the thing. (A in cut.) Next a piece 8 inches long of the same width and thickness. (B in cut.)



Then get one 4½ inches long, 1½ inches wide, ½ inch thick and cut notches ½ inch apart. (C in cut.) Glue this piece to the other piece or B. Now find two hinges and hinge A and B together as shown in cut. The last things are a prop (D in cut) say 5 inches long for luck, and a lath nailed on the end A to keep the frame from slipping off.

This size is for a frame of the same dimensions (outside measure). E is a lath nailed on to hold prop in position.

Clarence Goodhue.
(Aged 12 years.)

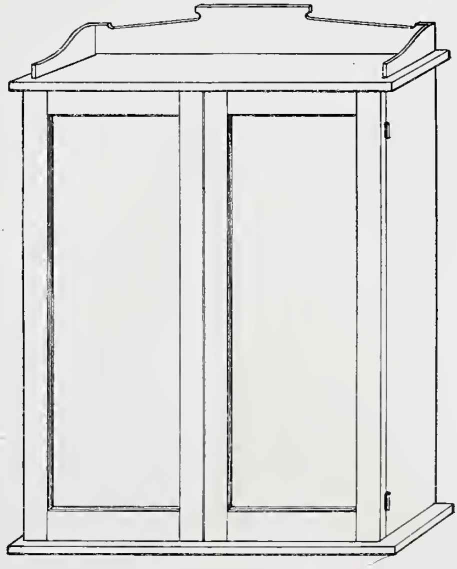
A PHOTOGRAPHIC CABINET.

We show this month a suggestion for a cabinet to hold photograph materials and can recommend it as a very convenient and practical thing to have. We have made one of this size and wonder now how we ever got along without it. It hangs on the wall in the bathroom over the end of the bath tub opposite the water supply. A wide board laid across the bath tub serves as a developing table and if a tray is by accident tipped over, the contents are spilled into the tub and do no damage. The cabinet in a case like this should be hung high enough so that the door when opened can not strike the tallest thing on the developing table, which probably is the ruby lamp.

The top shelf A contains the camera, tripod, plateholders and negatives.

Shelf B contains plates, sensitized paper, printing-frames, paper kits and brass forms.

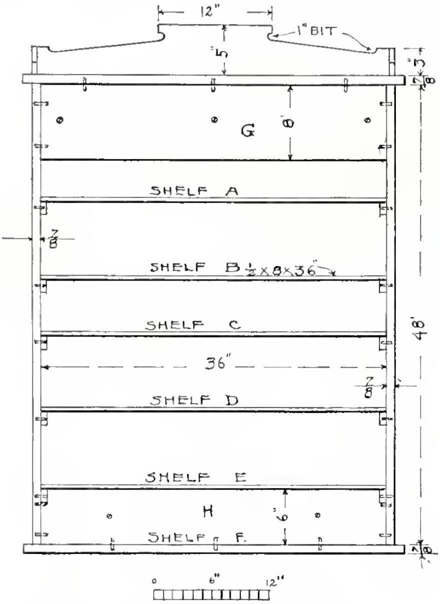
Shelf C has graduates, hydrometer,



stirring rods, funnels, print roller, blotters, oiled paper and small card mounts.

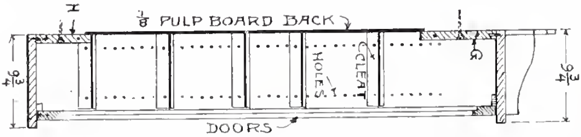
Shelf D is occupied by developers and chemicals.

Shelf E holds the hypo box, stock of hypo, alum, etc., tray for hypo-scales and bottles of paste — bought at a sale — and paste brush.

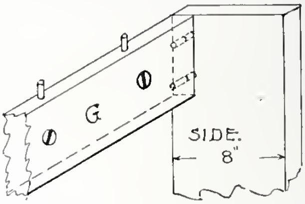


Shelf F is for the family medicines.

We thought while building this to allow room for the family medicines and to make it more convenient for the non-photographic members of the family to keep their bottles from getting mixed with ours than otherwise and we gave them the lowest shelf; however, we agreed that if our department became crowded so that we wanted the other shelf we would make a special medicine cabinet for their use.



We found a cigar box which, turned upside down, would just fit over our hypo box, except for its being too long, so we sawed it in two and nailed the end in the place we wanted it. We find this convenient not only in keeping out dust but also it is handy during development oftentimes to put plates in the hypo, put the cover on the hypo box and then leave the room for awhile.



Pieces G and H to be doweled into sides and also to top and bottom. Fasten to wall by long screws through both these pieces.

The construction of this cabinet is so simple that any one could make it without much previous experience in tool work. The dowels used are all ½-inch diameter except the ones in the cleats that support the adjustable shelves, which may be ¼-inch.

The pieces G and H are absolutely necessary to prevent side racking and to hang it up by, and with them doweled in as shown it is not necessary to put on a wood back. So for the purpose of making it lighter we suggest a backing of heavy pulpboard. The holes for adjusting the shelves can be 1 inch between centers and of course must not go through the side pieces.

Cut the side pieces first ⅞ by 8 by 48 inches, making them exactly the same width and length, with both ends square. Next cut the cross braces G and H and fit the ½-inch dowels in place. To bore the holes in both pieces so that the dowels will fit is very easy. For instance take the joint made by G and the side pieces: put G in place with the edge flush with the top end of the side and mark a line across the two pieces like Fig. 1. Then square the lines A A on the side piece, Fig. 2, and gauge the line O O. Square the lines around the end of G and gauge a line O O on that also, changing the gauge from the 7/16 inch, where it has been set and there will be no trouble about a fit. In all the cases where doweling is shown proceed in the same way.

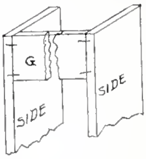


FIG. 1.

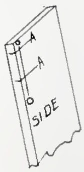
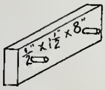


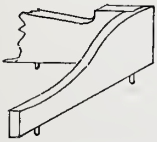
FIG. 2.

Next make the top and bottom pieces ⅞ by 9¾ by 40 inches long, which may be secured in place by 2-inch screws, as the heads will be covered up on the top shelf by the rail, and on the bottom we don't care whether they are or not. Before putting the parts together bore the holes for the support of the adjustable shelves. Then glue and screw the parts together, putting glue on both ends of the dowels.

Now make the cleats for the shelf supports by planing one long piece to size and sawing off the required lengths. Bore the holes for the dowels; these dowels to be ¼ inch in diameter. Fit in the five shelves, which are all alike, ½ by 8 by 36 inches.



Cleats under adjustable shelves.



Method of fastening on the top rail.

The top rail can now be made so as to give an idea how the cabinet is going to look. The first step toward making the back piece of this rail is to get the length; this will be the same as the distance between centers of the screws which hold the top piece to the sides. Then the width 5 inches. Now mark the centers for the small curves, which will be made by boring a hole with 1-inch auger bit. Those at the top will be 6 inches each side of a center line and 1¼ inches down from the top edge. The others will be 3 inches high from the bottom edge and 1½ inches in from the ends. In boring the holes avoid splitting off small pieces when the bit comes out the back by withdrawing the bit as soon as the screw center is through, and then finish by inserting the bit from the back. Mark out the diagonal lines and the short ones from the holes. Trim to the diagonal line by making a number of saw cuts extending from the top edge of the board down to the lines. Split the pieces off with the chisel and mallet and finish to the line with the chisel without the mallet. The bracket-shaped pieces for the end rails are to be made in the same way, and then saw the rebate joint as shown in the detail. Glue and nail together, putting the nails in from the back where they will not show; this is the reason for making this kind of a joint.

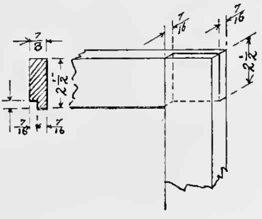
Set the rail on the top in just the proper place and mark for the dowels which will hold it, and bore ¼-inch holes; fit and glue the dowels in place.

Now, when the doors are finished it is ready for finishing, but don't hurry on the doors, as haste makes waste when it comes to making doors.

The rebate for the panels is figured to be as deep as one-half the thickness of the ⅞-inch door, and it is quite important that it should be made so, as in that case we can plane this rebate the entire length of the pieces, and this should be done after getting the pieces cut to proper sizes. Just here we may as well state that it is customary in factories to make doors about ⅛ of an inch larger each way than is actually needed, and then plane them down to a perfect fit afterward.

A home-made rebate plane and complete directions for using it were given in the last March issue of THE PHOTO-BEACON, so it will be unnecessary to repeat it here.

To make the half-lap joint used in these doors care should be taken that the pieces are accurately marked before attempting to saw them. The beginner had better lay the strips in place before marking or sawing and put a × mark near the end of each piece indicating the parts that are to be cut away. These marks will be on the back of the "stiles" or long vertical pieces, and on the front face of the "rails" or short horizontal pieces. Square the lines across the face and down the edges. Gauge the depth $\frac{7}{16}$ inch to one-half the thickness of the wood; this gauging all to be done from the front faces, so that on the



Construction of the doors. Panels may be either glass or thin wood.

stiles are gauged the ends that remain in, and from the same front face (after it is put together) is gauged the part that is sawed out on the rails. These gauge lines to be on the two edges and ends of both the stiles and rails and extending from the line which was squared across the faces to the ends. Saw out the small block or piece with the × mark previously made on it, taking care to have the saw kerf or cut entirely on the waste piece and only the edge of the teeth at the center of the line. Saw across the face of the piece 7/16-inch deep or to the gauge line with the back saw, and putting the piece vertically in the vise saw down the end with the rip saw, also having the kerf on the waste wood. If the sawing is accurately done the pieces will fit exactly with no doctoring, but if not sawed deep enough to allow the faces to come flush or even, it will be necessary to dress it down with the chisel. In this event use a chisel not less than one inch wide, and work from the outsides toward the center with the bevel side of the chisel up. In the event of the sawing being too deep, the projecting face must be planed down with a smoothing-plane.

When all is right glue the joints together and put a clamp on each corner after testing the frame for squareness.

The glue joint should be sufficient, but if desired the joints can be screwed from the inside of the door with two screws in each joint. These screws should not be put in until the glue has thoroughly hardened, which will take at least twenty-four hours, during which time the clamps must not be removed. Fit the panels, which may be of glass or ⅜-inch thick wood. If wood is chosen the panels may be put in at once, but glass should not be put in until the doors are hung and the staining, varnishing, etc., is all finished, as it is less liable to be broken. In hanging the doors it will be necessary to secure a small piece of wood to the floor and ceiling of the cabinet to serve as a striker or stop for the doors.

A hook may be placed on the inside to hold one door closed against the stops, and the other locked to the first. To hang it up it will be necessary to find where there is a studding in the wall to hold the screws. These can be located by tapping the wall lightly with a hammer; the solid sound is where the stud is located. Bore holes in piece G opposite the studding and fasten with at least three ¼ by 4-inch screws. To prevent lower end of the cabinet from swinging outward, put two screws in piece H also. Do not trust the cabinet to hang on the screws unless they enter a studding.

Our bathroom has a wood wainscote the top of which is a trifle higher than the center of the cabinet, so we found it necessary to put a board on top of the wainscote and against the plaster to fill in the space.

VIEWS OF PARIS EXHIBITION.

Mr. John R. Williams, American Brake Company, St. Louis, writes that he wishes to buy or exchange views illustrating "A Trip to the Paris Exhibition."

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL.
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of THE PHOTO-BEACON COMPANY.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

Accepted literary articles will be paid for upon publication.

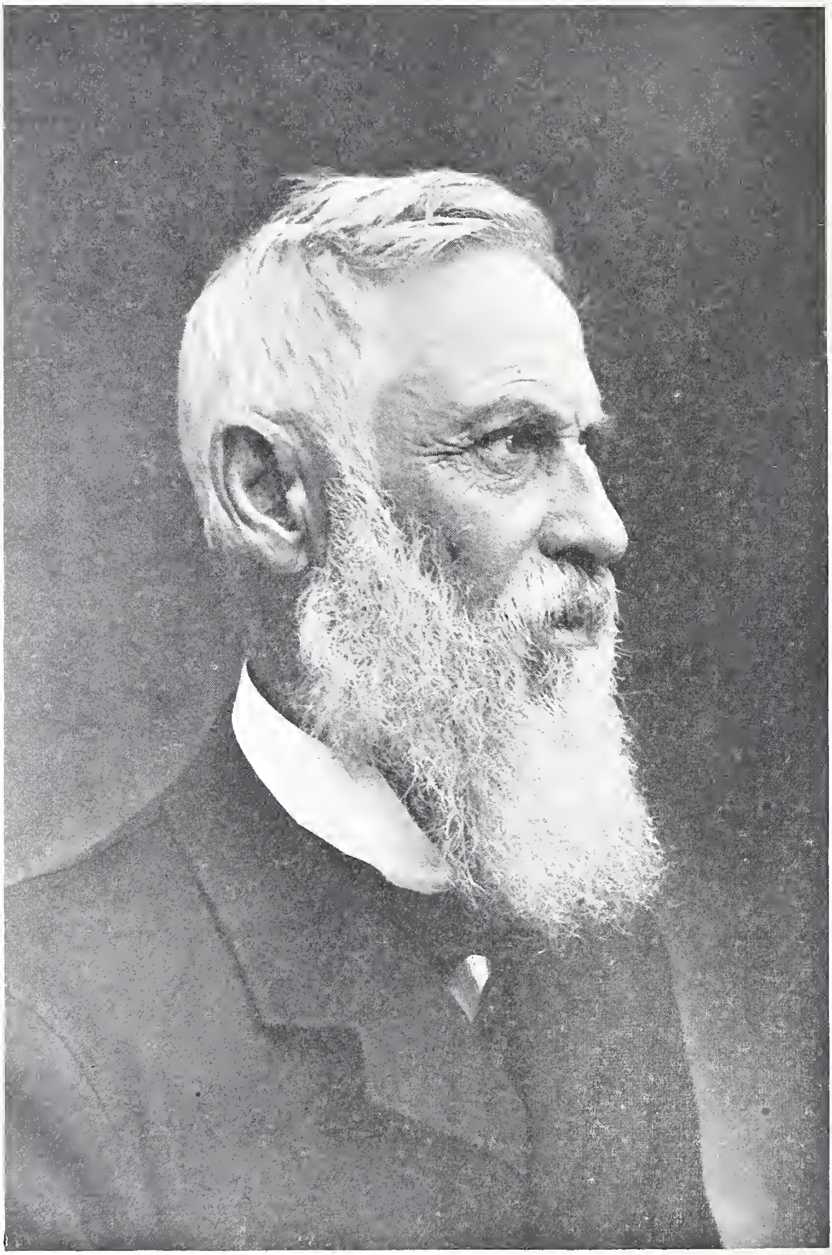
Secretaries of photographic societies are requested to favor with brief reports of their meetings.

Subscribers advertising secondhand apparatus for sale or exchange, special articles wanted, help or situations wanted, *one insertion free*.

To insure insertion in any particular number, copy for advertisements must be received not later than the 20th of the month preceding.

All communications relating to THE PHOTO-BEACON should be addressed to

THE PHOTO-BEACON COMPANY,
TRIBUNE BUILDING,
CHICAGO, ILLINOIS.
Eastern Office: 80 Wall Street, New York.



Negative by George Dittman, St. Paul, Minn.

FIRST PRIZE.

THE
PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. OCTOBER, 1900. No. 10.

COPYRIGHT AND THE AMERICAN PHOTOGRAPHER.

The American photographer, as a rule, is keenly appreciative toward any movement which promises him an advantage in the business. The growth and importance of the State and National photographic associations are practical evidences of his earnestness in seeking business success. In his business methods, in his enterprise, and in his professional ability he easily outstrips his European fellow-professional as we have known him in Germany, France and Great Britain.

But with all his alertness and progressiveness he has almost completely overlooked a business advantage which, of all others, he should be the first to perceive and grasp. We refer to his strange apathy concerning photographic copyright.

In no other country are pictures and illustrations so popular or so important a feature in everyday life as in America. Illustration is, in fact, universal. The daily and weekly papers, the periodicals, and printed matter of every sort with which we are literally deluged at every turn, depend largely for their interest upon illustration. Portraits of prominent people and scenes, pictures which interest as news records or by their pictorial attractiveness, records of incident and life at home and abroad, indoors and out, of work and sport, of humor and pathos — all these are sought for, gathered in, and published far and wide by every conceivable method of reproduction. The public demands pictures, and the public pays for them. But who makes the pictures and who profits by their sale? Here are two plain questions. Let every photographer answer them for himself, and we are sure of his interest hereafter in the question of photographic copyright.

A glance at any illustrated paper will show that the photographer bears the burden of the public demand for illustrations. Nine-tenths of the pictures published in our newspapers and periodicals are direct reproductions from photographs. In how many instances does the photographer profit by this use of his work? We venture the answer, not in one instance out of ten. Why should he not profit by this use of his work? If he equips himself for its making, if he produces by his skill something which has salable quality, should he not be the first to profit by his skill and labor? Does the publisher furnish his paper to the public without money and without price? Why should the publisher profit by selling the photographer's work, and the photographer be content with "glory?" Does the publisher pay the photographer for the use of his productions? Sometimes, when he is compelled to do so; never, if he can avoid it. Why? Because the photographer has not yet learned to appreciate the value of his work to the world — its plain, matter-of-fact value to those who purvey news or information to the public.

These things are worth thinking over. By availing himself of the protection of copyright the photographer may secure for his own benefit certain legitimate profits arising from his business which at present he permits to go to waste, or, rather, to go for the enrichment of other business men who can turn his product into hard cash.

It must not be imagined that we impute any blame to the publisher. As a business man it is his chief interest to get and reproduce what the public will buy. If he can get his materials without cost, so much the more profitable will be his business. The mistake lies with the photographer, who is so careless of the sources of income or profit rightly belonging to his business. The remedy lies in a better appreciation of the advantages of copyright and in united action to secure these advantages. If it is found that the photographer is not properly protected by copyright laws at present existing — as is, indeed, the case — there is all the more need for photographers to unite in the effort to secure proper legislation.

We believe that as soon as the American photographer looks squarely at this question of photographic copyright he will perceive its obvious advantages and insist upon his reasonable rights. Therefore, we urge again, as we have urged before, that photographers should enroll themselves as members of the Photographers' Copyright League, and put themselves in touch with the work this League is doing for their benefit and advantage. All that is necessary in order to secure this membership is to send a request to be enrolled, with your name and address, to the Secretary of the League, Mr. Charles E. Bolles, 244 Fulton street, Brooklyn, New York.

The following letters, which we are happily permitted to publish, offer interesting facts supporting what has already been pointed out concerning the practical advantages of copyright to the photographer:

WALDORF-ASTORIA,
NEW YORK, August 10, 1900.

DEAR MR. TODD,— The accompanying letter from Mr. Elliott, senior member of the well-known firm of Elliott & Fry, of London, should open the eyes of American photographers to the unfairness of our present copyright laws and to the practical benefits accruing to the profession when its members stand together for mutual protection, as they do in England. In no other country of the world do the laws make it so difficult for the photographer to protect his work as in this free land of ours; in no other country is it so easy for the pictorial pirate to steal our labor and go unpunished. The supine indifference of photographers to this state of affairs, and the financial loss they thereby incur, must be quite as amusing as it is profitable to the publishers who thrive upon the photographer's work.

Sincerely yours, B. J. FALK.

HADLEY HOUSE,
BARNET, ENG., July 24, 1900.

MY DEAR MR. FALK,— I have to thank you for your kind and interesting letter of March 19, and should have answered it earlier, but hoped to be able to tell you that the new bill that is before Parliament had become law. The committee that is sitting on it in the House of Lords has, however (last night), postponed all further action in the matter until next session. In the meantime I am very well contented with the existing state of affairs. Our Photographic Copyright Union, of which I am proud to be the founder, is working well. We met great opposition from the press the first years of its existence, but by continuous fighting and winning some good actions we meet now with no serious opposition. Whenever a newspaper or magazine proprietor or other person wishes to reproduce a copyright photograph he first applies to the proprietor for permission to do so, and pays a minimum fee of half a guinea; if to be reproduced large size, or if it be an important subject, he pays from one guinea to ten guineas for the privilege, though 10s. 6d. is the usual fee.

The following figures will show you that I have done exceptionally well the first half year with copyright fees:

January,	1900	£294
February,	"	276
March,	"	502
April,	"	289
May,	"	360
June,	"	283
		£2,004

From the above you will see that I have made just over £2,000 by my copyrights in six months. Of course, this is partly due to the war in South Africa. I have the best series of generals and war portraits extant, and I have made about £500 by one portrait alone, that of Major-General Baden-Powell.

And now as to the future. I think I told you when I saw you in New York that, up to the eve of my starting for Japan, two and a half years ago, I was engaged with others in drafting a new copyright bill. It was taken up by Lord Herschel. He went to America and died there, and the bill was never heard of more. Next a bill was drafted by the Royal Academicians, which was totally against the photographers, but *why* we never could tell, except that so-called artists are jealous of us, and, besides this, a man, who shall be nameless, the manager of a very large *sweating* London publishing business, had a principal hand in drafting the bill. He is one of those persons who like to have the use of other people's photographs for nothing if possible. This bill was introduced into Parliament, and was referred to a select committee in the House of Lords. It is called Lord Monkswell's bill, and, of course, we photographers fought it tooth and nail — I, among others, gave evidence before the committee. The Photographers' Copyright Union got every amateur photographic society in the kingdom to petition against the bill, and the Union did other excellent work, with the result that during this session the bill has been redrafted *entirely in the photographic interest.*

Photography is put on a par with painting, etc., in fact, it is alluded to as a "fine art." The term of copyright is for life of the photographer, and for thirty years after death. The photographer is proprietor of the copyright, whether paid for taking the picture or not, only in case of payment the photographer can not make use of the photograph in any way without the consent of the person who gives the commission, until after his death. But the principal feature in favor of the photographer is that it does away entirely with registration — the bill is a model of conciseness and simplicity. It has been read a second time in the Upper House, and has been sent to Canada and Australia for the approval of the Colonies, and there is every prospect of its becoming a law next year.

Negative by Dr. Detlefsen, Chicago.

SECOND PRIZE.

In the meantime, as I have said before, we are going on here remarkably well. I wish I could compliment you on the way you are going on in America. Anything more deplorable than your description of the state of the law of copyright with regard to photography it is difficult to imagine, and I can only sympathize with you with all my heart.

Hoping for better things for you in the future, and with kindest regards, I am,

Yours very sincerely,

(Signed) Jos. J. Elliott.

PICTORIAL COMPETITION No. 28.

In no phase of pictorial work, as shown in our competitions, has there been exhibited such great advance as in this, the Home Portraiture Competition. If our readers will refer back to the same contest in the spring of last year, we fancy they will be more than surprised at the wonderful improvement. We only wish that we could find space to reproduce as many more of the pictures. It is such work that encourages the editor to strive to get really able men to teach sound, artistic principles to the readers, for it shows his labors are not in vain.

The judges made the following awards:

First prize, Geo. Dittman, 515 Ashland avenue, St. Paul, Minnesota; second prize, Dr. Detlefson, 2769 North Lincoln street, Chicago, Illinois; third prize, James E. Taggart, Lewis Center, Ohio.

PARTICULARS OF PRIZE PICTURES.

First Prize.— Taken August 20, 1900, in shadow of a house, 5 P.M., on Cramer's Banner plate, stop 32; exposure, one-half second; developed with diluted Pyro; printed on Willis & Clements' Platinotype paper.

Second Prize.— Taken August 27, 1900, at 4:30 P.M., by light from attic window facing east, on Seed's 26 X plate, stop No. 4; exposure three seconds; printed on Eastman's Sepia paper.

Third Prize.— Taken indoors on Stanley No. 50 plate, stop No. 8; six seconds' exposure; printed on Artura paper.

FUTURE COMPETITIONS.

Competition No. 30.— Snap-shot pictures. Closes October 31.

Competition No. 31.— Landscapes. Closes November 30.

Competition No. 32.— Ray-filter pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.

2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

PRIZES.

First.— Books to the value of $5.
Second.—Books to the value of $2.50.
Third.— Books to the value of $1.
To be selected from our catalogue.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

RULES.

1. Write on one side of the paper only.

2. Be brief, sending less than one thousand words, if possible.

3. Never mind style—use the smallest words you know.

4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.

5. Write your name and address at the end of the article.

6. Mark the envelope "Literary Competition."

7. Preference given to practical articles; that is, those that tell "how to do things."

Lewiston, Me., Sept. 14, 1900.

The Photo-Beacon, *Tribune* Building,
Chicago, Illinois:

Gentlemen,— Perhaps it would interest your readers to know that the exhibit of seventy-five pictures made by J. Wesley Swan on Standard Dry Plates for the Grand Trunk Railway was awarded the Gold Medal at the Paris Exposition, 1900.

Very respectfully,
Standard Dry Plate Co.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F.R.P.S.

CHAPTER IX.

THE FOREGROUND AND ITS TREATMENT.

The majority of landscape subjects, if analyzed, will be found to be made up or composed essentially of three parts, namely, foreground, middle distance and distance. In photographs, at least the majority of them, the chief interest will be in the foreground; indeed, to the pictorial photographer the foreground may be said to be the most valuable part of the picture. "A good foreground subject," is an expression often in the mouth of photographers, for even the untrained picture maker seems to instinctively realize that in the foreground he will find the mose pleasing features of the scenes which he seeks to portray.

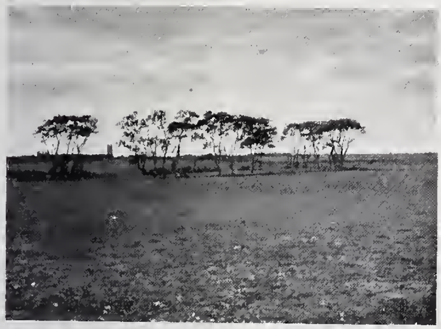


Fig. 27.

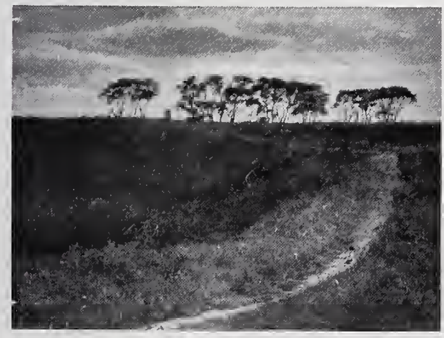


Fig 28.

A glance at any collection of photographs will demonstrate the truth of these remarks; indeed, a reference to the reproductions which illustrate this series of articles and which were taken to illustrate quite different points, will all prove the truth of the assertion. It is to emphasize the importance of the foreground to the pictorial photographer, and selecting and composing his picture that we lay so great a stress upon this part of the subject.

We would not, however, be misunderstood; in art there are no inexorable rules — no laws of the Medes and the Persians — and many beautiful pictures may be found in which the foreground is only of secondary interest. But this will be of more frequent occurrence in painting or drawing; in photography the rule we have referred to will usually obtain.

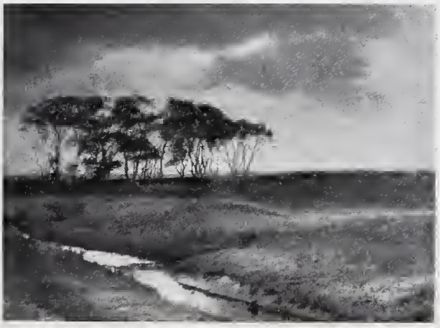


Fig. 29.

As a practical illustration of the importance of a suitable foreground let us refer to the illustrations which accompany this article. Fig. 27 is a view of a spot well known to English photographers and many will recognize the row of gaunt, wind-swept alders which form so prominent a landmark in the wide marshy district by which they are surrounded. Now our aim was to get a good pictorial rendering of these trees, but we found that owing to the generally uninteresting nature of their surroundings it was a task by no means easy of achievement.

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* Copyright, 1900, by F Dundas Todd.

The result of our first attempt is seen in Fig. 27, and from an artistic point of view it is very disappointing. For foreground we have a wide expanse of dreary, absolutely uninteresting, flat marsh, unrelieved by any interesting feature, and the trees themselves, beautiful as their fantastic outlines look, silhouetted against the light, fail to impress the observer, but rather resemble a group of stunted saplings. This clearly was not a successful realization of our ideal, and we spent a long afternoon in tramping the surrounding marshland in search of a more pleasing point of view. In this we were eventually rewarded, for, after a time, we found a path and a high bank, which seemed to give us stronger and more definite lines in our foreground. We accordingly made a second exposure with the result shown in Fig. 28. This is obviously a more pleasing rendering than Fig. 27, for in place of the blank, uninteresting space forming the foreground we have long, grassy hillocks and a picturesquely winding path which insensibly leads the eye from the immediate foreground to the principal object of interest in the picture, namely, the trees.

But we were not entirely satisfied with our endeavors, and wandering round in the same locality one fine afternoon, after a heavy and continuous spell of rain, we came upon a ditch which in ordinary seasons was usually dry, but on the occasion in question was brim-full of water. Here was our long-sought-for opportunity, a fine foreground for our trees, and one withall, that would strengthen the composition rather than weaken it. We soon decided upon the point of view that appeared to give the best rendering of the subject, and exposed our plate with the result shown in Fig. 29.

The student will find it instructive to compare these several attempts, and with the aid of our criticisms, analyze their respective compositions. Besides the technical lesson we desire to convey by what we have written, we would impress upon our readers the absolute necessity of a plentiful supply and due exercise of perseverance and patience, two qualities that, even among photographers — a proverbially patient class — are far too rare.

The mere casual photographer, working in such a district as that of which we have been writing, might have rested content with the result shown in our first attempt, and would consequently have missed the reward that a more painstaking search would have resulted in.

We trust, however, in our attempt to drive home these fundamental home-truths to our readers we shall not appear unduly egotistical in our remarks, because any such desire is very foreign to our intention.

Before leaving the subject of these particular illustrations we would point out that, in Fig. 29, although the foreground makes the picture, yet the "motif" or principal object is not to be found in it. The dominant feature of the composition is still the characteristic group of trees, the importance and beauty of which the introduction of a suitable foreground with strong leading lines has greatly enhanced and strengthened.

As an illustration of a subject in which the interest unquestionably centers in the foreground we would refer the reader to Fig. 30, which is essentially what is called "a foreground subject." Its attractiveness and interest lies in the group of boats on the muddy reed-grown shore, and if we took these away we should at once rob the picture of any merit it might otherwise possess.

In dealing with foreground subjects some care is necessary in selecting the most suitable point of view. A mere jumble of whatever material the foreground may happen to consist of will not serve our purpose, or produce a pictorial result. For example, in the locality where we found the subject of our illustration, "Strand-on-the-green, near Kew," the shore is lined for nearly a mile with the "flotsam and jetsam" that will accumulate as years roll by on the banks of a tidal river. But however intrinsically picturesque such details may be, to indiscriminately plank the camera down and make a haphazard exposure would not, in the majority of cases, unless by a rare and happy chance, result in the success which a more careful selection of the point of view would probably bring about. There are, of course, occasions when it is imperative to lose no time in securing, perchance, a fleeting effect of light and shade, but, as a general rule, the photographic picture maker should never be in a hurry, either in selecting his view point, or in making an exposure. We have often wandered for hours together along the waterside hamlet in question and sometimes have been rewarded with a rich store of subjects, while at other times we have not found an opportunity of exposing a single plate. Had we done so, under the then existing conditions, we should but have been wasting good material.

In dealing with foregrounds a great difficulty will sometimes be experienced in keeping the subject-matter simple, and preserving a due breadth of effect. The first difficulty can only be overcome by a careful observance of the hints already given in selecting the point of view. Recollect that you do not want to include a great many petty details in your picture, each rivaling the other in attracting attention. One or two boats strongly grouped together in a riverside view, for example, will form a far more satisfactory composition than a number of little boats and accessories scattered broadcast over the view. In the one case we shall secure unity and breadth, in the other a number of distracting details which will negative or destroy both these qualities.

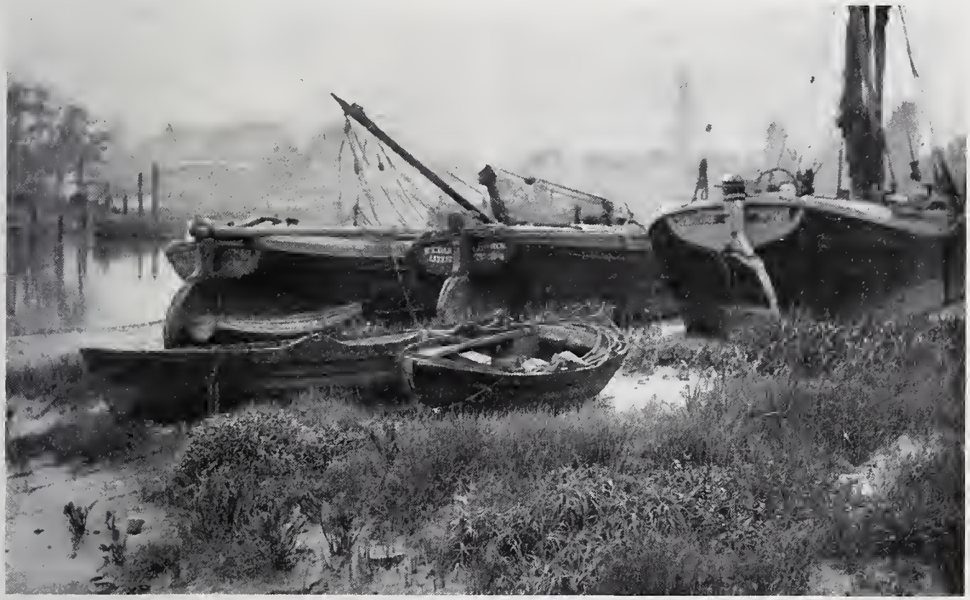


Fig. 30.

We must, also, be very careful in focusing a foreground when it constitutes the principal feature in our picture. If we stop down unduly, for instance, and make everything bitingly sharp, then goodbye to all aërial perspective and subtlety of expression. Although I am an advocate of the employment of large stops, yet it is often a mistake to concentrate the focus upon one plane in the immediate foreground, because the sharpness of the definition of the part focused upon will probably be in glaring and inartistic contrast with other planes, which, for the same reason, will appear more out of focus than they in reality are. In dealing with these foreground subjects it is better to use a single landscape lens, the aperture of which has been opened up *sufficiently to make it just impossible to secure critical definition anywhere.* This will give a pleasingly soft and round image which could not be obtained with a doublet, or indeed, in any other manner.

In warning the beginner against making any portion of a foreground study too sharp, it must not be inferred that we are advocating the production of a blurred or fuzzy image. In short, whatever method of working is adopted we should not, in looking at the result, be conscious that the definition is either sharp or the reverse. Sometimes a trial print will reveal the fact that despite all our care the definition is too wiry and clear; in such case a more pleasing result may with some subjects be obtained by printing through a sheet of thin celluloid.

(*To be continued.*)

A SIMPLE FLASH-LAMP.

I have had great success with my home-made flash-lamp. I will try to explain how it is made.

First, you get just an ordinary clay pipe, and if you can drill out the hole in stem a little larger, so much the better.

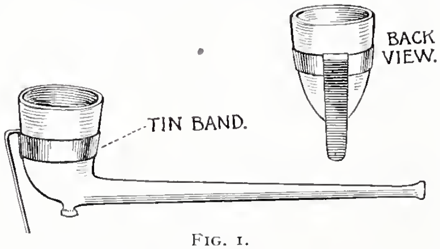


Fig. 1.

Next, get a piece of tin (or better still, brass) and fasten it around bowl (Fig. 1) with a piece projecting downward. This projection is for fastening the pipe to something. The best thing to hold it is a music-stand, taking out the rack proper and using the stand. Have the tin projection made to fit into the slot made in the stand. This stand is very convenient, as it can be raised and lowered as suits the subject. Place around the top of pipe-bowl a strip of asbestos or lamp-wick and glue it fast. You next want a bulb and tube. What is used on the shutter of a camera is very good, but almost any kind will do. Put the end of tube over pipe-stem and you are ready to make your flash.

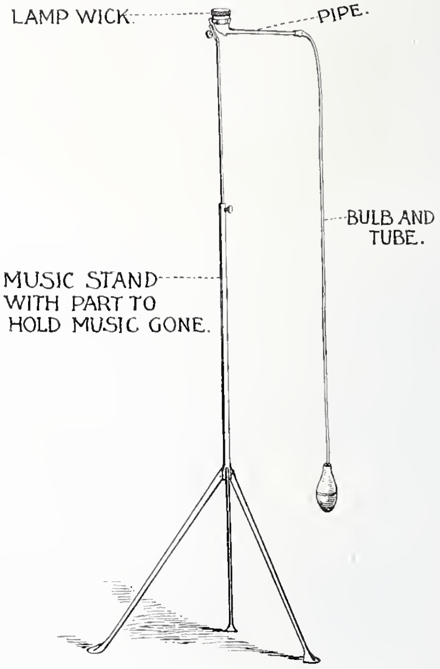


Fig. 2.

To make the flash, proceed as follows: First soak up the wick around bowl of pipe with alcohol; then put the amount of powder to be used inside the bowl; place pipe in stand and when everything is ready, light the wick and wait until there is a good flame over the bowl and then squeeze the bulb and the deed is done.

This apparatus burns all the powder and makes a fine flash. Fig. 2 shows the whole outfit. T. T. Henning.

Neg. by F. E. Bronson, Painted Post, N. Y.

LAFRANC ROSES.

HOW TO DO SOME THINGS.

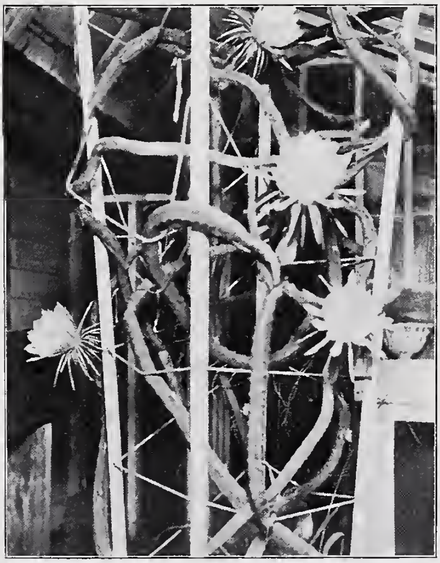
If you want something that comes in handy and does not cost much, get some spring clothespins. You will continually discover new ways of using them.

Whenever you are printing in the sun clip one at each side of the printing frame where the semi-circular depressions, for convenience in raising the back, are placed. Then your frame will sit up at an angle of about forty-five degrees and will not slip down as often occurs when it is leaned up against the side of the house or some convenient object. Of course this is practicable only with the smaller sizes of frames.

When printing with a mask it often happens that the central part of the negative is not the part desired, so the mask and printing paper have to be placed at one side, or above, or below the center as the case may be. It is impossible to print it thus with a printing frame of the same size as the negative. Maybe you haven't a larger frame, so what are you going to do? Just this: Place your mask and paper over the part desired, then on top of this lay the back only of your printing frame and bind all together by clipping on four or five of the spring clothespins. There you are; just try it once and you will see how nice it works.

And again, when making *passe-partouts,* just clip the cardboard and glass together while binding the edges and you will never do it any other way. I should think it would work all right when binding lantern slides, but having never made any slides I can not say so positively.

INSIDE KITS. — I have tried to make kits of wood but have never succeeded. The difficulty is in getting them thin enough so that they will not interfere with the working of the slide. I now make them of heavy cardboard. Suppose your plateholders are 5 by 7 and you want to use 4 by 5 plates. Cut a piece of cardboard 5 by 7 inches; it will fit into the holder same as a plate. Then on the center lay a 4 by 5 negative and cut around it. You will then have a frame of cardboard. Blacken it (liquid shoe blacking will do) and on one side paste a piece of black paper over the opening. To put in a plate just place it in the opening. The black paper on the back will prevent it from going through. Then across each



Neg. by M. E. Shacklady, Troy, N. Y.

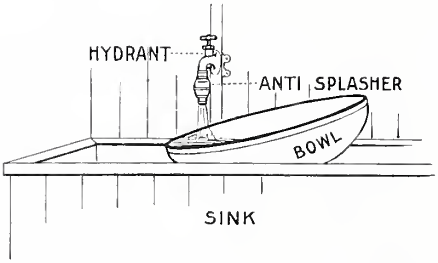
NIGHT-BLOOMING CACTUS.

corner stick a small piece of gummed paper. This will hold the plate in securely. To remove it cut the strips of gummed paper at the corners. When the kit is once placed in the holder it may be left there, as it is not necessary to remove it when putting in or taking out the plate.

E. C. DYMOND.

WASHING PRINTS.

There is, perhaps, no operation connected with the making of photographs more trying to the patience of the average amateur than that of washing the prints when toning. The mere "toning" and "fixing" would only be play but for the tedious process of washing before toning and after fixing, and many a batch of prints are spoiled because the amateur gets tired of standing by to keep the prints separated while washing, and, in consequence, he hurries them out of the washing water and into the toning bath before the silver has been fully eliminated, and then hurries the final washing, which results in mottled prints that soon fade. The final washing should never be less than one hour in running water.



I have tried a number of devices for keeping the prints separated while washing, and I have found the most successful, and at the same time the cheapest arrangement for the purpose, to be a large wooden bowl (one about twenty inches in diameter is a good size for a dozen to about four dozen 4x5 or smaller prints), or a large wash bowl will answer. Place same in the sink in such a manner that the water from the hydrant will strike the side of the bowl about an inch from the top, tilting the bowl sufficiently to accomplish this result, and at the same time allow the overflow to escape in the sink. An anti-splasher, on the tap, will complete the apparatus. As an anti-splasher, I use the Sultana Filter, having first removed the filtering compound. The object of the anti-splasher is to keep the water from spreading out into sprays, and to increase the pressure, thus obtaining a steady and uniform stream of sufficient force to keep the prints constantly moving. The flow or pressure of the water can easily be so regulated as to keep the prints in slow or rapid motion as desired — a rather slow motion being the best, since it will not break the prints. When this has once been regulated, the washing will require no further attention, the motion keeping the prints sufficiently separated. The anti-splasher, or filter, will cost from 10 to 25 cents, and the wooden bowl about the same.

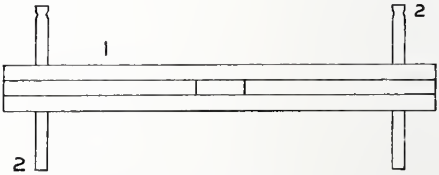
The accompanying illustration will better explain the manner of using the bowl.

W. R. KING.

A BACKGROUND CARRIER.

Permit me to show you a design for a home-made background carrier. It will hold any ground up to 6 by 6 feet. It is made of 1 by 2 inch lumber.

Nail three pieces about two feet long together, leaving space in center for upright. Then nail two pieces about two feet long across the end; this will give the base. The upright should slide in the center. A notch in the top of upright will prevent slipping of small rope. It takes very little room and any one can make it. To fasten the rope or heavy string two nails are driven slanting. I have used it for a 6-foot reflector. The upright in use is about seven feet long.



GEORGE HARTMANN.

Neg. by James E. Taggart, Lewis Center, Ohio.

THIRD PRIZE.

COMPOSITION OF PHOTOGRAPHIC JURY AT THE PARIS EXPOSITION.

The jury of Class XII of the Paris Exposition, or of photography, as it was usually called, contained, besides amateur and professional photographers, camera makers, opticians, and photo-engravers, some of the most noted men in photographic science.

Among them were the president, M. Alphonse Davanne, author of numerous works on photographic science; Dr. Joseph Maria Eider, vice-president, director of the Imperial-Royal School of Graphic Arts of Vienna; Dr. A. Miethe, of the Imperial Technical School of Charlottenburg; Prof. E. Wallon, of Paris, who is the author of one of the best works ever written on the subject of photographic optics, and also a chemist and mathematician of renown; and Leon Vidal, author of various works on the science and mechanics of photography.

Braun, Boyer and Nadar, of Paris, and Pricam, of Geneva, Provost, of Toulouse, represented the profession. Bucquet and Bourgeois, the president and secretary of the Photo-Club, of Paris, Count Desmezieres, representing Greece, and Herstlet, representing Great Britain, defended the amateurs. Hermagis, lens-maker; Demaria, camera-maker; Geisley, photo-engraver; and Cameron, artist, by their special knowledge in various directions, helped to make the judgments of the jury of Class XII as complete and thorough as possible. Three experts were associated with the jury. Carpentier was consulted for information on mechanical construction, Gile on wood-work, and Bertaut on photo-mechanical processes. Englestead, of Denmark; Dubuloz, representing Equador; Kawamura, of Japan; Poulat, of Mexico; and Baron Leonino, who represented Italy for a day or two, were irregular in their attendance, as they occupied diplomatic or other positions in the legations or commissions of their respective countries.

In spite of the fact that the exhibits of photography in the American section were not what might have been expected the jury was particularly generous. Some of the best work was from the Baker Art Gallery, of Columbus, Ohio, and Miss Frances B. Johnston, of Washington. Only two amateur photographers were represented, and one of them by a single proof. Large interior views, by Lawrence, of Chicago, were considered remarkable; photographs of yachts, by Balles, of Brooklyn, platinum reproductions of paintings, by Curtis and Cameron, and the work of Brenner, of Cincinnati, were also considered excellent. The jury asked and received permission to give a recompense to George Schiras, of

Pittsburg, for his remarkable flashlight pictures of wild animals, which were not exhibited in the section of photography, but in the pavilion of Hunting, Fishing, Forestry, etc.

Levy's screens, three-color work, by Chicago firms; Eastman's kodaks; Bausch & Lomb's lenses and objectives; and several American sensitized papers were considered to be of unusual excellence, and received relatively higher awards than the photography.

Every American exhibitor, with one exception, received an award, and two awards for colaborators made the number of awards more than that of the exhibitors. One grand prize, seven gold, thirteen silver and six bronze medals, and three honorable mentions, were given in this section.

The grand prize went to Eastman's kodak and paper exhibits. The gold medals were awarded to Curtis & Cameron, Bausch & Lomb, Chicago Colortype Company, Max Levy, Baker Art Gallery, C. E. Balles, and Miss Frances B. Johnston. E. Cameron.

A HOME-MADE VIGNETTER FOR NEGATIVES.

No doubt there are a great many amateurs like myself who aspire to portrait-making, and one of the things necessary is a practical vignetter for negatives. It isn't much of a trick to vignette a print off white, but I wanted to have my subject's face and bust to "stand out" and to have all the rest of the print dark or black. Never having seen a thing of this kind advertised or for sale, I set to work making one.

I first got a thin strip of wood about one inch wide, ten inches long and an eighth of an inch thick. I then cut a slot in one end about five inches long, giving it the appearance of an old-fashioned two-tined fork.

I then glued a block of wood about an inch square to the other end, with three slots sawed into it, one at an angle of about 45 degrees, one at an angle of about 25 degrees, and the other straight down. I then cut a piece of black cardboard, about five inches long and four inches wide, with one side hollowed out in a semi-circle, with the edge of the circle notched. This card I stuck in one of the slots in the block, and fastened the whole to my camera and tripod by letting the forked end of the vignetter go each side of the screw in the top of my tripod and fastened my camera down on it, making the whole secure and rigid. The object of the forked end is to allow the operator to place the vignetter as near or as far from the lens as it may seem to require, thus regulating the amount of negative to be cut off, and the object of the slots is to regulate the degree of light or shadow I wished to give my negative. If I wanted a gradual shading off from the bottom of my negative to the bust of my "patient," I would use the 45-degree angle; if less gradual the 25-degree angle, and if I wanted it quite abrupt I would stand the card upright. The whole thing being out of focus leaves no trace of itself on the negative. This seems to me to be a very practical thing, and as I am always glad to receive pointers, I give this in return for the many valuable hints I have received from your journal, and sincerely hope it will be of some use to my fellow-sufferers.

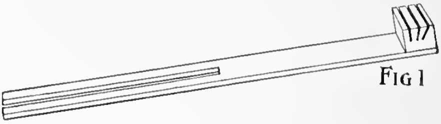


Fig 1

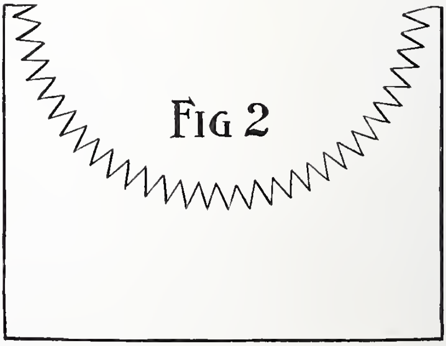


Fig 2

The above is a cut of my vignetter.

C. J. Lokerson.

A NOVEL CAMERA AT THE PARIS EXHIBITION, DESCRIBED

BY ONE OF THE PHOTOGRAPHIC JURORS.

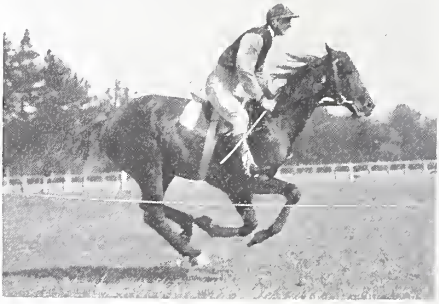
What is the most interesting exhibit in the section of photography at the Paris Exposition? If one may judge by the manner in which the jury made its awards, it is a focal plane magazine camera working at a maximum opening of the lens, and from one-fortieth to a measured speed of one four-thousandth of a second, invented by Guido Sigriste, an artist and painter of military subjects. It seems almost incredible that a camera can be constructed to do this, and it might be imagined that such results are produced by a most elaborate and complicated mechanism, and possibly with the aid of electricity. It is, on the contrary, extremely simple in its mechanism — so simple that the inevitable reflection, "Why has it never been done before"? occurs to almost every one who examines it.

Negative by C. L. Thompson, Seattle, Wash.

The deliberations of the jury were governed by regulations laid down for it by the Administration of the Exposition, but it also, by a sort of common accord, and without any parliamentary action, adopted certain principles which were rarely departed from. Among these was the one that exhibitors who had not previously shown their work, products, or inventions in other expositions, or put to the test of the scrutiny of the public for a considerable time, should not receive as high awards as others who had so proved the value and stability of their exhibits. In other words, something brand-new and untested received encouragement, but was left to win its full reward in some future exhibition. The justice to all concerned is evident, although it might have been a much easier matter for the jury to have considered only the apparent merit of the exhibits.

In the case of Sigriste's camera, its merit was so patent that after considerable discussion it was given a higher award than any other exhibit of a single object. Sigriste, who did not take up photography until about four years ago, did so, as most artists do, to secure documents to aid him in his painting. In attempting to make photographs of horses in motion, which might serve him in painting charges of cavalry, he encountered the limitations of the existing cameras. He could not make a near view of a horse running at right angles to the direction of the lens and secure any details of the anatomy of the animals, the values of light and shade were always untrue, even with the best of objectives and plates. After much experimenting he concluded to follow the precept: "If you want a thing done well, do it yourself." He studied the optics, chemistry and mechanics of photography, not superficially, but thoroughly, and at length produced a camera which, with ordinary rapid plates, and any good objective with a wide opening, takes pictures of race-horses running at full speed directly across the field of the camera, from as near as fifteen feet, showing the nails in their hoofs, jockeys in yellow, light against a blue sky, and with truthful effects of aërial perspective in the landscape. It will also work clearly with the feeble light of an interior on a gray day in winter, at 4 o'clock, or at sundown, in the shadow of a house in summer. Its construction also permits the removal or replacing of the objective in full sunlight, with a box full of plates ready for exposure behind it.

Two factors govern the speed of the shutter—the opening, and the motive power of a spring and slack cord. By turning a notched dial on the face of the camera the opening of the shutter is regulated, each turn of a small crank moving the edges of the shutter one-half millimeter, and at the same time moving the dial by passing from one notch to another. From the center of this dial is a bar of metal attached to a pinion in the center of a clock spring, which furnishes the motive power. It is marked with numbers corresponding to those marking the notches, which indicate the opening. Turning this bar increases or decreases the tension, and at the same time indicates on a table in the dial opposite the number of the opening, stamped ——— on the bar, the fraction of a second which this combination of opening and tension will cause a point on the plate to be exposed to the action of the light.



Stop *f*-4. Exposure 1-2000 second.

The speed of each opening is carefully tested by a most delicate chronometer (such as is used for testing the speed of rifle and cannon balls) at low tension, and the tensions tested with a wide opening so that the highest speed resulting from the highest tension and the smallest practical opening (one-half millimeter) can be accurately calculated.

The opening of the shutter is at the end of a bellows which joins the front of the camera at the edges of a plate on the front of the camera to which the objective is attached. The bellows follows the movement of the shutter opening. This opening is not created until the shutter is in movement, as a plate covering the opening is first released, and it then drags the open shutter after it, insuring an equal exposure up to the edge of the plate. The sides of the opening graze the plate so close that a sheet of cigarette paper can not be passed between. The sides of the opening are chisel-shaped, and as sharp as a knife-blade, and reduce refraction or reflection of light from the edges to a minimum.

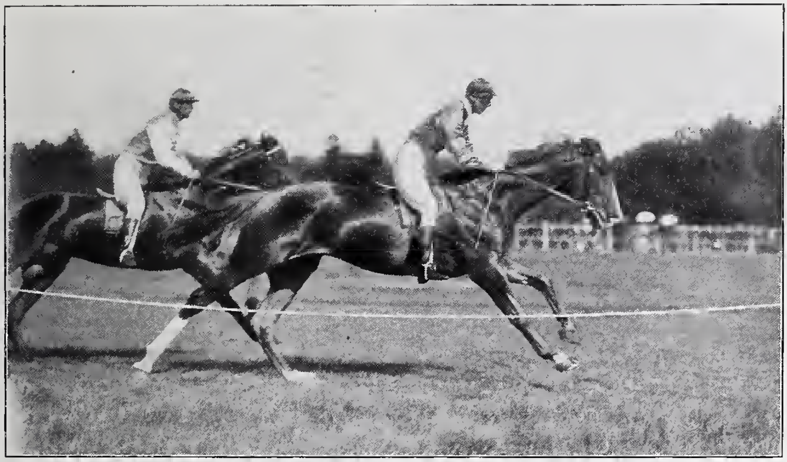
It will be seen from this that no new scientific discovery, but the perfection of known mechanical principles, makes this camera an instrument of high precision.

There are, however, certain new theories which seem to be proved by it. Scientists have long claimed that the rays of a pencil of light, coming from an infinite distance, cross between the two combinations of an objective at the point where the diaphragm is usually placed. It is Mr. Sigriste's theory that they do not cross until they have traversed both combinations, at the focal plane. It is another theory of his that the working of an ordinary shutter is responsible for much of the falsity of value in most photographs.

The illustration of a race-horse was made at a speed of 1-2800 of a second. A comparison between it and the best work obtained with an ordinary focal plane shutter will show the superiority of this camera. The camera is also capable of giving expression by exaggerating a movement. By rapidly moving the camera in the direction in which a man is walking, for example, the lower part of the figure is taken first and the upper part is thrown forward, giving an effect of accelerated action in the resulting negative. From a quiet landscape a suggestion of wind blowing and bending the trees is obtained in the same way.

In art, science and sport the rôle of this camera is undoubtedly destined to be of greatest importance.

E. Cameron.

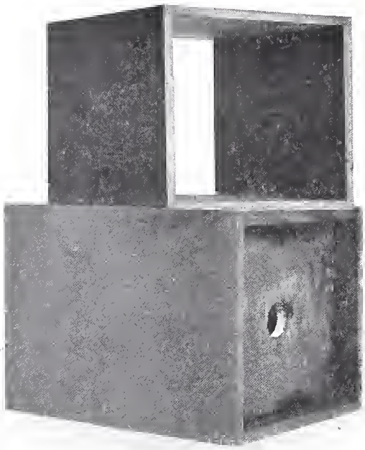


Stop *f*-4. Exposure 1-2000 Second.

ENLARGING WITH A FIXED FOCUS CAMERA.

According to my promise I send you today a photograph of the box I have been using for enlarging from negatives on bromide paper.

The photograph almost tells the whole tale, but I will try to make it so plain that anybody can understand it. The upper one of the two boxes is, as the picture shows, open at both ends and must be made so that it fits pretty close into the farther end of the lower one, which of course is open, but not so tight that it can not be moved out and in to lengthen or shorten the focus.



The partition is, in my box, put ⅝ inch from the outer edge, which will fit a 4 by 5 Vive frontboard and lens.

The size of negative to be enlarged from, and focus of the different lenses, will tell the dimensions of the boxes. It is clear that the inside measure of upper box must not be less than size of negative, and the same rule holds good, as with cameras, that a small negative can be enlarged with a large box, but not vice versa. The length of the boxes depends, as I said, on the focus of the lens to be used; and for mine, with a focus of 5 inches, I made it so that the distance from negative to lens could be varied from 5 to 7½ inches, with lower box overlaying the other 3½ inches with longest extension. This gave me from double diameter to any size.

For the amateur who did not happen to see any tables for enlarging I will give the figures for a few short-focus lenses.

Focus of lens. Inches.	Times of enlargements. 2.	3.	4.
	Inches.	Inches.	Inches.
3	9 4½	12 4	15 3¾
4	12 6	16 5⅓	20 5
5	15 7½	20 6⅔	25 6¼
6	18 9	24 8	30 7½
7	21 10½	28 9⅓	35 8¾

The upper of the two figures is distance from lens to bromide paper and the lower from lens to negative.

For folding cameras, only one box, like the upper one, will be needed if back is detachable.

I hope that anybody now can go to work and get the boxes made to suit his case. It is not necessary to go to any expense about it, as the whole thing can be made out of pasteboard and be just as serviceable. I made my first one of that material, and it was a success; it only took me forty-five minutes from start to finish after I got it settled in my mind how it had to be done.

Any box camera with shutter and diaphragms placed on the inside of frontboard is, of course, the easiest, as the latter can simply be changed from camera to box; but for enlargements, where plenty of time will have to be given, anybody can make shutter and rotary stops out of pasteboard.

Having got the box made, cover up northern window with several thicknesses of heavy paper. I used common brown building paper; three sheets pasted together. In the center cut an opening the size of negative to be used. On the inside fasten upper box and paste strips of paper round it to make it light-tight.

On the outside of opening paste some narrow strips of paper on both sides and one end of opening for negative and piece of ground glass to slide in; ground glass to be between light and negative. Now put lower box over the other one and push it in till the distance from lens to negative is correct. Make a support for box to rest on and get it level. At the right distance from lens, place a large box and cover the side of this with a sheet of white paper to focus on. Open shutter and make a mark at each corner of picture, that you see on it, so it will be known where to place bromide paper when ready. Use small pieces of bromide paper to find out correct time. After that is found out expose and develop according to directions accompanying the bromide paper and if no mistakes have been made a beautiful picture will be the result. If the boxes should not prove to be perfectly light-tight where they telescope into one another, it will not do much harm as this light will be thrown on the window covering, but to

Negative by D. H. Swiler, Harrisburg, Pa.

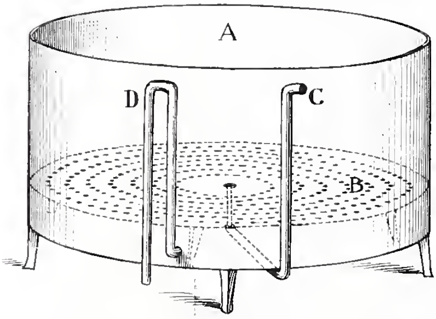
make sure it is better to tie a piece of cloth round them.

Hoping that my little invention, through your paper, will be the means of gladdening some other amateurs who, like myself, have not got $25 or more to spare for an enlarging camera.

CHRIST NISS.

A PRACTICAL PRINT WASHER.

The answer to the query, "Why do my pictures fade?" is often because you do not wash your prints right to get rid of the hypo. I will give a description of a print-washer I have used for more than a year, and it works perfectly. I hope it will be of some service to a few of my brother amateurs who, like myself, believe the finished print ought to be permanent and that after a few years it should not present the appearance of smallpox or fade away altogether, as often proves to be the case. This fading can be prevented if we use the right means and are content with something better than merely leaving our prints to soak, changing the water a few times, or even allowing the water to flow into the receptacle. Many believe that if they leave the prints in the water a long time the hypo is bound to come out; but have you ever thought that during a prolonged soaking your print is absorbing the various deleterious matters with which town water usually abounds and that is helping to make the last state worse than the first? What is wanted is a machine which will keep the prints moving all the time without danger of finding them a mass of cracks when we remove them. The washer I am going to describe can wash three to four dozen 4 by 5 prints without any danger of doing this. But do not put too many in — just enough to give them plenty of elbow room — and the way they will turn and twist among each other will be a picture to behold.



A is a circular zinc trough, japanned inside, ten inches deep and twenty inches in diameter, raised on four short legs. *B*, the false bottom, is also supported by four legs, and raised about two inches above the actual bottom. It is perforated with small holes and with a large one in the center for the supply pipe. *C* is the supply pipe made of zinc or lead, one-half inch in diameter, with a small piece projecting from the top for attaching it by india rubber piping to the main. The lower end crosses the bottom until the center is reached, when it turns up, and to it is soldered a quarter-inch piece of pipe to act as a nipple, which must be brought up through the false bottom and cut off level. *D* is the siphon made of half-inch pipe, and soldered to the outside, being bent round within an inch of the upper edge of the trough, with one end of the pipe going through under the false bottom, so as to carry off all contaminated water. All being ready, attach your india rubber piping to the tap, turn on the water, and when full put in your prints. A very short experience will soon tell how much to turn the tap so the inflow is equal to what the siphon can carry off. Any one with the use of the soldering iron could easily make one for himself, but failing, you can have a tinsmith make it for you at a moderate price. I had one made for a friend who was unable to find time to complete the one he had started. It cost $1.20, which I think is cheap, for it will last forever, and it is far superior to the washers on the market for two or three dollars.

WILLIAM E. BROWN.

H. A. HYATT, 410 North Broadway, St. Louis, has just issued his latest catalogue. A copy lies before us, and in looking through its 300 pages we fail to see anything wanting that anybody would want to know about. It should be at the hand of every one interested in photography. It will be sent on receipt of 10 cents to pay mailing expenses.

AN IDEAL CAMERA FOR AN AMATEUR AND HOW TO MAKE IT.

After taking pictures with a big square folding 5 by 8 camera, I longed for a camera with which I could do any kind of work, but, alas! in looking over catalogues, all cameras shown had some drawback, and to me not the least was the price.

I have found the 5 by 7 size the most suitable and not very costly, for with brass kits in a 5 by 7 holder the first cost is little more than a 4 by 5, and the range of work is almost twofold.

The ideal camera should be one with which you can do the following:

1. Long-focus work and landscape work generally.
2. Architecture and portraiture.
3. Take two, three, four or more pictures on the same plate of the same subject or of different subjects.
4. Stereoscopic views occasionally with one lens.
5. Enlarging and copying.

The camera should have a reversible back, long-focus bellows (at least seventeen inches for 5 by 7), swing back

John R. Coryell, Cornwall, N. Y.

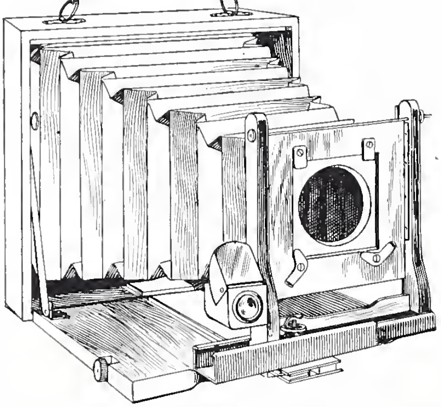
CUTTING THE THREAD.

and sliding front of at least three inches; also a good range of rise and fall.

A camera answering all the above requirements for a 5 by 7 did not cost me over $5 without lens and plateholders. My camera is 8¾ by 8¾ by 3⅞. I use a Unicum shutter, an R. R. lens and Perfection plateholders. It does not differ materially from the average style of long-focus reversible back cycle camera except in the arrangement of the front.

In making a camera the bellows is perhaps the chief difficulty. To any one who wishes to make a good serviceable bellows I would highly recommend them to get the *Scientific American* supplement of December 24, 1887, No. 625 (copies cost 10 cents direct from publishers), in which there is a very able article, "How to Make a Camera Bellows." It is several pages in length, gives drawings for different styles and sizes and explains fully how to crease, fold, etc.

FIG. I.



For material nothing can beat pegamoid, a material used by bookbinders; it is a leather cloth, very thin and almost lightproof, and when lined with silesia is perfect. It cost me 50 cents a square yard, and that amount made an 18-inch bellows and covered my camera. The same length and style of bellows would cost me $7 if bought from the dealers if I had got the red leather bellows. The brass-work cost me about $3, made at the machinist's, and with the wood-work, which I made myself, brought the cost of camera to about $5. In making a bellows, I would advise one with folding similar to folding in Fig. 1, in preference to the folding in Premo style in this season's catalogue, as it is easier to attach to front and rear frames.

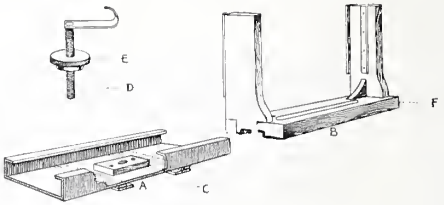
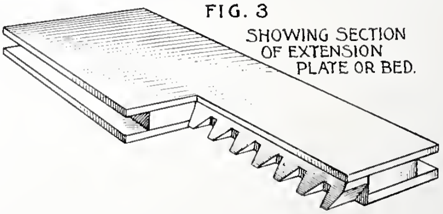


Fig. 2.

I would advise looking at cameras to get a method of making a reversible back. For swing I use thumb-nuts on screws which go through slots in braces which hold up front (see Fig. 1). This is similar to the swing on the Universal camera, only the thumb-nuts are used inside instead of having slots in the sides of the camera. For extension front, I had a machinist make one similar to Fig. 3. It is made of brass, the different pieces being soldered together and riveted, and the brass rack beneath placed centrally. It is 1½ inches wide, the top and bottom pieces being of hard, thin brass, and the center thick, so the bottom and middle would be equal to the rack in thickness. I got the brass rack and pinion from Streingler & Co., Detroit.

For an ideal front I refer you to Fig. 2. *A* shows a brass trough in which the wood front *B* slides. *C* is a bed plate soldered to bottom of trough to hold screw to tighten all of front to the extension bed. *D* is the screw similar to the regular style. This screw has

FIG. 3



SHOWING SECTION OF EXTENSION PLATE OR BED.

a thumb-nut *E* that works on it and tightens the wood front *B* in the trough *A*. *F* is a hole in the wood front to allow full slide of 3¼ inches. It is as wide as the diameter of screw that tightens everything to extension plate. The brass trough was made of hard brass bent around a steel bar. It is 5 inches long and 1½ inches wide and about ⅝ inch thick. Wood front is same length and should fit snugly in trough, but not too tight to stick when sliding.

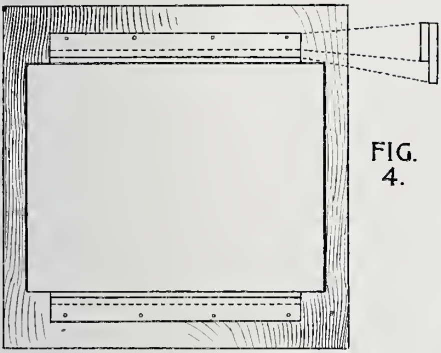


FIG. 4.

SHOWING INSIDE OF REVERSIBLE BACK WITH MAT SLIDE IN POSITION AND END VIEW OF ONE OF SAME.

On the inside of the reversible back and along the long sides fix two pieces of cardboard as slides to put black cardboard mats in. Fig. 4 will show how I made them.

With a few of these mats you are equipped for any number of pictures on the one plate, as well as stereoscopic views. Fig. 1 gives a view of camera in position to take the left-hand stereo view, as well as all small pictures on that half of plate. The illustrations will show the great range of work that can be done with this style of front.

With such a front I have taken stereo pictures in less than fifteen seconds, and it can be fitted to any camera that will allow of it in width. When taking stereo pictures I never tighten the wood front by means of the thumb-nut *E*, as it is not needed if the wood front fits snugly in the brass trough. With such a camera I think the amateur is ready for any kind of work and then he is not bothered by a lot of useless apparatus, only his camera and an ounce of cardboard mats.

I hope that some of the readers of The Photo-Beacon will build their own camera, as it is not a hard thing to do, at least I did not find it so, and I am a novice in the use of tools.

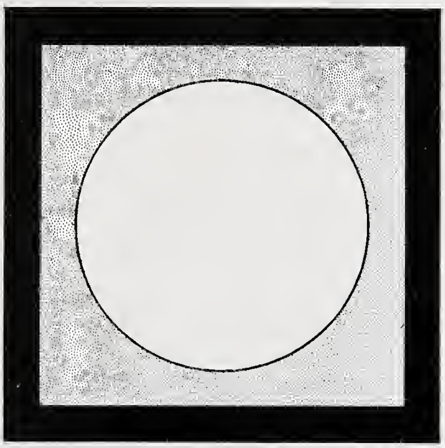
E. C. Srigley.

A PRACTICAL RAY-FILTER.

Seeing some of the beautiful effects rendered in photographs by the addition of clouds to the sky, I also wished to produce them, as is the ambition of every amateur. Going among the photo-dealers of my city I found the ray-filters somewhat expensive.

The following is a description of a ray-filter made by myself: Take an unexposed 2½ by 2½-inch plate and immerse it in a solution of hyposulphite of soda and water (the same strength as for fixing negatives), and leave it in the solution about ten minutes. This operation must be done in the darkroom. At the expiration of the time specified take the plate from the solution and wash in water, being very careful not to scratch or mar the film in any way. Wash for half an hour.

Make up a saturated solution of bichromate of potash; put the plate into this solution, film side up, and examine frequently. The density of the yellow color will depend upon the length of

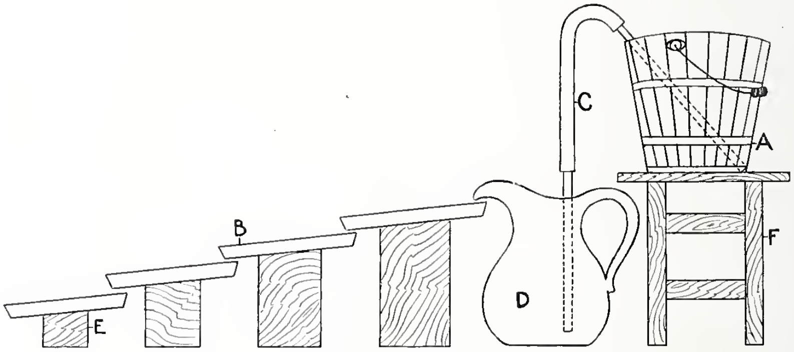


time the plate is left in the solution. The plate is then taken from the solution and stood in a place where there is not much dust, and left to dry. The filter can be used so, but it is better to take a piece of glass the same size and fasten it against the film-coated size, both being then bound together by binding strips used in making lantern slides. The filter can be made to look very nice by inserting between the two glasses a piece of opaque paper, having a circular hole 1½ inches in diameter cut in it. To get the best results isochromatic or color-corrected plates must be employed.

Arthur J. Light.

PLATE WASHING.

How did you wash your plates while on your summer vacation? This is a question that has been asked me by amateurs and also by those who did not have running water. While on our vacation and if we are in the country we want to see our results and we would not think of developing our plates unless we had running water near; at least I felt this way and I will try to tell you how I washed my plates without running water. The device is very simple and any number of plates can be submitted to a gentle flow of water.



The main supply is a large pail or vessel called A in the illustration. It is set on an elevated support. Below you can arrange any number of pans slightly tilted, one overlapping the other. The pitcher should stand so its lip overlaps the higher tray. Two glass tubes and a short length of rubber tubing furnish a siphon which needs only to be put in operation to set the current in motion and it will run till the pail is empty. The overflow can be received in another vessel and made to do duty repeatedly, but I would advise you to use fresh water.

By this simple washer some of the most tedious operations in photography may be decreased. A number of small blocks may serve as a support for the pans. If you have a washing box you may also use the siphon in the same way, only leave out the lower glass tube, and use a longer piece of tubing.

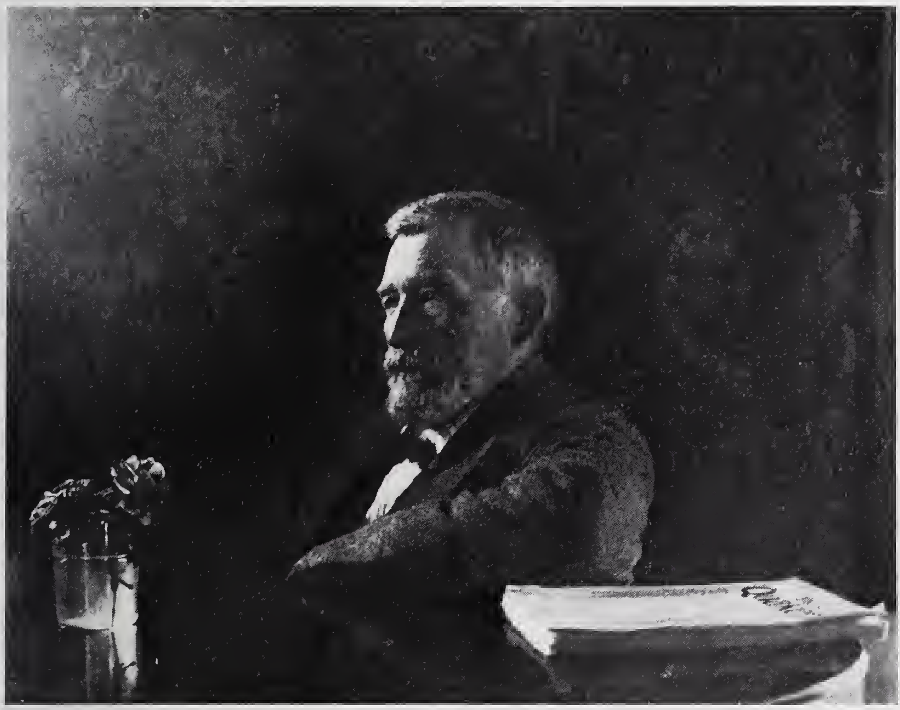
William E. Brown.

SILVER STAINS ON NEGATIVES.

From time to time I have noticed that a great many workers complain of silver stains on their negatives through printing from them before they were perfectly dry. As I have never seen a certain and safe remedy in print, nor indeed have I heard of any except one which I have worked out for myself, I think it may be of some use to your readers if I give it.

I presume the negative to be operated upon has not been varnished or treated with medium. If so, it must first be cleaned off in the usual manner with alcohol before applying the solution. The solution I use is made up of hypo 2 ounces, sodium phosphate 5 grains, lead nitrate ¼ ounce. Dissolve in 6 ounces of water, and then add ¼ ounce of alum, after which it may be put on one side to clear before using.

This is really a sulphur toning bath, and the action seems to be to tone the silver stain in the negative right away. It also clears up the negative and makes it clean and bright. The time required to do this varies. The negative from which the enclosed prints were made took one and a half hours to clear the stain right away, but this was what I should call a bad case.



Negative by Martin Johnson, Independence, Kan.

I discovered the useful action of this solution by accident, while experimenting with some P. O. P. prints in a sulphur toning bath. When a print was allowed to remain in the bath long enough, I noticed that the silver image toned right out, disappearing altogether. It immediately occurred to me that if this were the effect it had upon the silver salt in the paper, it might have the same effect upon the silver stain on a negative. I tried it, and have since often found it useful.

It works equally well for stains from P. O. P. and albumenized paper. The solution may be kept in a bottle and used several times. After treatment the negative must be well washed and allowed to dry spontaneously. Should any sediment settle upon the plate it must be carefully wiped off with a tuft of wet cotton wool before drying the negative.

Albert C. Tandy.

Kalispell, Mont., Sept. 20, 1900.

F. Dundas Todd, Chicago, Illinois:

Dear Sir,—Am very sorry it has been so, but I have found it impossible to go ahead with Postal Camera Club on account of so much other and important business taking up my time.

Have requested Mr. Henry Hall, of Dongan Hills, to do what you so kindly suggested myself to do. Think he will prove the right man for the place.

Yours truly,

George V. Robinson.

TRADE NOTES.

The Blair Camera Company announces it will place upon the market October 15 a new camera known as the No. 3 Folding Weno Hawkeye. This little camera is the most compact outfit in existence, making a 3¼ by 4¼ picture, being only 1⅝ by 4⅜ by 7¼. It is fitted with double lens, and retails at a less price than similar cameras on the market.

The Lovell Dry Plate Manufacturing Company have opened, at 64 and 66 Wabash avenue, a Chicago office and stock depot, where they will be able to supply the trade with the Lovell Plate and with the other specialties in dry plates they have recently introduced.

Home Hobbies, Arts and Crafts

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CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER.

INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

It has been suggested that this department furnish some suggestions and simple exercise models that will help those readers who desire to make simple and pretty, small articles that will be useful in the home, and show them how to proceed to make them nicely.

The growing boys of today all over the country are receiving a training of the mind and hand to work together, and are taught how to construct with their hands and a few tools what their minds conjure up as useful and helpful in their lives and homes.

The great majority, however, of those who received their schooling before manual training became so general have not the thorough understanding of the use of tools and do not know how to proceed properly to construct even a very simple object. Many regret this very much, knowing that there are countless things presenting themselves on every hand which would be desirable to own, but the cost places few within reach. They look so simple, oftentimes, that many are tempted to make one which especially strikes their fancy, but they do not know how to proceed.

We know of many ladies who take great pleasure in the interesting art of pyrography or burnt-wood etching who will go down town and buy some small wooden article to decorate at a cost of perhaps a dollar, when one who knew how to do it could make a similar article for less than 5 cents' worth of material, saving the balance, which would be the real value of the time and labor spent in making it.

The work itself is very simple, indeed, and can just as well be performed by a lady, or a boy, as a man. There are two tools — the plane and the saw — which are, perhaps, the most important ones in most work, and which are used more than all others combined. The others are really of minor importance, inasmuch as they are more easily controlled. Their use is, therefore, secondary. The plane bothers almost every one at first by obstinately refusing to make the edge of a board straight and at right angles with the side or face of the piece.

It is like the minister's new typewriter, presented to him by his congregation. He said it was a splendid machine but it would not spell correctly. So it is with the plane and the saw at first, but they both can be taught to behave themselves by using the stern method of *making them*.

We gave very full directions for planing in the May issue of The Photo-Beacon, but any kind of directions on paper are theory at the best, and to be of real use must literally be at the finger tips; so take a piece of thin wood and read those directions with a plane in the hands, trying carefully, one step at a time, so as to be sure that the hands grasp the idea as well as the brain.

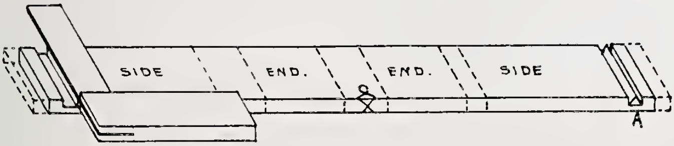

Fig. 6.

Think of any board as having two "faces," two "ends" and two "edges." If the board is smooth on the faces, put a mark on one face and plane one edge perfectly straight and at right angles, or, to use the proper term, "square" with the "working face," which is the face with the mark on it and the one we are working from. Use a piece of thin wood to start with; a piece of cigar box will do nicely. When this working edge is straight and true, put a mark on it, also, to distinguish it from the other one (like Fig. 6).

For Fig. 1, measure the width (1¼ inches) from the working edge, placing a dot near each end; rule a line through these dots and plane the other edge to this line, taking care that this last edge is perfectly straight and square with the "working face" at the time the line is reached.

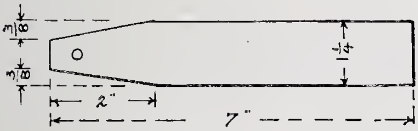

Fig. 1.—Pencil Sharpener.

When this much with the plane is practiced until mastered so that the plane is held "square" through force of habit, the student has learned the hardest and most useful work with this tool. One end should be squared off before the length is measured. Never lose sight of the fact that all lines across the faces or edges must be squared from either the working face or working edge; thus the handle of the square must be held tightly against the working edge with the left hand, the blade resting flat on the working face while the line is drawn across the face (Fig. 6). In like manner, the handle of the square is held tightly against the working face while the line is extended down both the edges.

In sawing the ends off, the bench-hook* should be used to hold the piece while it is sawed off with the back-saw. The cut made by any saw is called the "kerf." This kerf (Fig. 13 C) must be entirely on the waste-wood side of the line, while one side of the kerf which is made by the sharp points of the teeth must be exactly on the line. It is obvious that the finer the line the more easy it is to follow it accurately; therefore the best line to follow for nice work is a knife line. This is made by scratching with the point of a knife. The knife should be held down near the point and in a position similar to a lead-pencil (Fig. 15). The knife should make a cut through the first fibers of the wood, and the points of the saw teeth should follow the center of this knife line, cutting one-half of it away. The saw is held firmly in the right hand, with the forefinger extended along the side of the handle. To start the cut, press the side of the saw against the thumb of

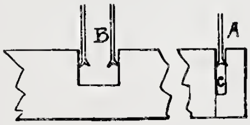

Fig. 13.

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*Described in last March issue.

the left hand, which acts then as a guide. Start with a backward stroke. Do not press down on the saw, but rather overcome this tendency toward crowding by using hardly more pressure than the weight of the saw itself gives. The saw should be gradually lowered until it is in a horizontal position, the eye following the knife line just under the teeth as they disappear in the kerf and on the side of the saw nearest the line. The stroke should be as long as possible, bringing into action every tooth on the saw in a backward and forward motion and in a perfectly straight line.

Fig. 14 shows a proper range of movement; the dotted line indicates the angle of the saw at the starting of the cut.

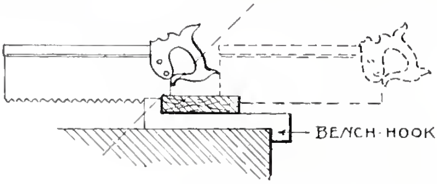

FIG. 14.

The ends when sawed should be square with the working face and working edge.

One end having been squared, the piece may be sawed to the proper length by squaring the other end.

To finish up Fig. 1, mark and plane the bevels and glue a piece of No. 1 sandpaper on both sides of the piece, extending up to where the bevels start. Cut the sandpaper a trifle larger than required and trim it after the glue is dry.

For the seed label shown in Fig. 2, proceed exactly as for Fig. 1, using also a piece of cigar box. Instead of putting the sandpaper on, round the one end with a knife.

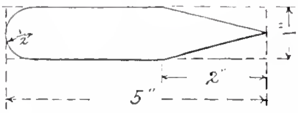

FIG. 2.—Seed Label.

The string-winder (Fig. 3) is just as simple as the others, until it comes to the curves, which may be whittled out with a knife or sawed with a coping or scroll saw.

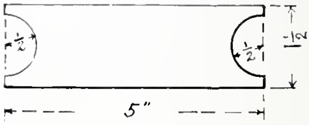

FIG. 3.—String Winder.

There is absolutely nothing about these three exercises that is hard for the beginner to do except to make them perfectly accurate according to measurements, and this should be the chief aim. If this can be done the first time by a beginner, he is an exception to the rule. If not, do not be discouraged, but take the same exercise in another form so that the work will not become irksome.

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL,
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of THE PHOTO-BEACON COMPANY.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

Accepted literary articles will be paid for upon publication.

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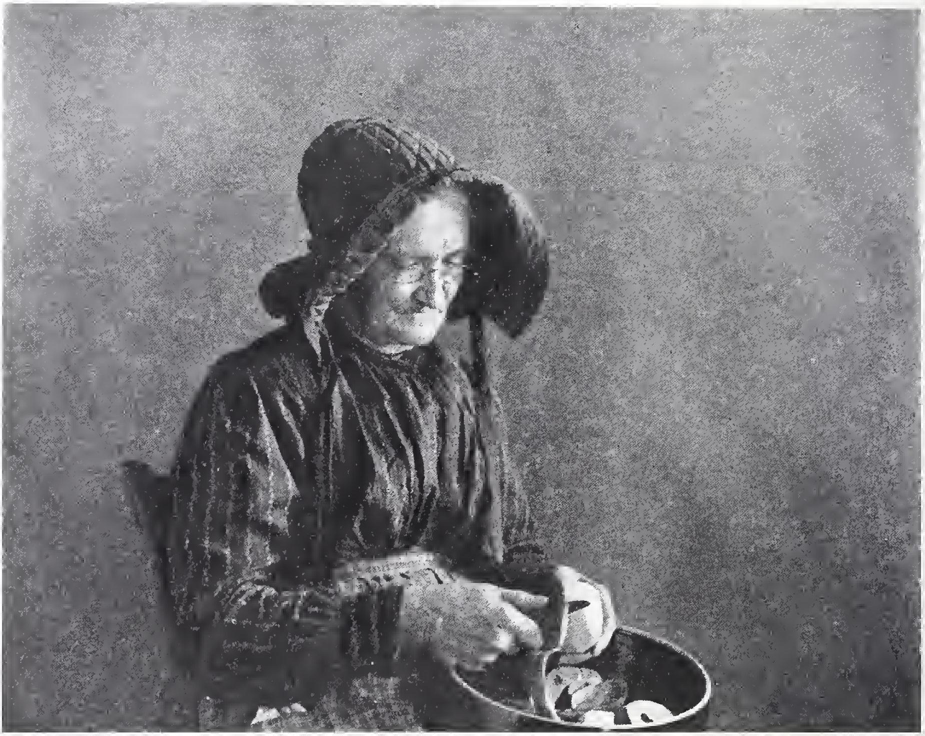

Negative by James E. Taggart, Lewis Center, Ohio.

FIRST PRIZE.

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. NOVEMBER, 1900. No. 11.

PICTORIAL COMPETITION No. 29.

We sometimes wish our readers could watch the judges as on the first day of each month they tackle the problem of placing the awards. It is to them one of the events of the month, for they have been so long associated with the work that they really recognize the style of many of the competitors. But one of the chief sources of their interest lies in watching how certain individuals have apparently resolved not to give up until they have gained at least once the distinction of being first. " Here's a beauty from Taggart. I wonder if he will win out," cried one of the judges, for Taggart's work is well known to them. It is always good, and recently has always been well up, so the judges were sure he would one day come out on top. This time he did, and he deserves all the honor he gets, for he has honestly worked for it, and besides had two strong competitors. "Motherless," by Mr. Hardy, captivated the judges with its beautiful pathos, while a very similar feeling decided them in giving the third position to Dr. Detlefsen. The latter gentleman has been doing some wonderfully fine work lately, and confesses he was much influenced by the work shown at the Chicago Salon. He there realized the possibilities of photography, but happily he is strong enough to strike out a line for himself and to avoid mere imitation. All his figure-work is done in an ordinary attic which he has converted into a studio.

We want to whisper a little secret into the ears of our readers. Seeing the keen interest so many of them were taking in the pictorial side of photography we decided to give them the benefit of an artistic course by one of the best art teachers in this country, and we are glad to be able to announce that Mr. J. H. Vanderpoel, teacher of figure drawing and painting in the Art Institute of Chicago, has kindly agreed to contribute to this journal a series of twelve articles on posing and lighting, during 1901. This is the first time in the history of photography, we believe, that an artist of repute has felt sufficiently interested in photographers to give them the benefit of his training, and we feel sure our readers will appreciate our efforts to provide them with the very best that money can buy. There are other good things coming to them of which more will be said by and by. In the meantime we wish to say this, that the big increase in the circulation of the journal during the year provides the money with which to buy such expensive contributions, and if they keep on recommending the journal to their friends and again increase the circulation we fancy we could afford spending even bigger sums.

AWARDS.

First prize.— James E. Taggart, Lewis Center, Ohio.

Second prize,— George H. Hardy, East Lebanon, New Hampshire.

Third prize.— Dr. Detlefsen, 2769 North Lincoln street, Chicago.

PARTICULARS OF PRIZE PICTURES.

First Prize.— Taken indoors by a west window, on a bright sunshiny day, with a 4 by 5 Ray camera, on a Stanley No. 50 plate, stop *f*-16, exposure 7 seconds. Printed on Willis & Clements' C. C. platinotype paper.

Second prize.— Made April 2, 1899,

10:30 A.M., on Stanley plate No. 50, stop *f*-8, exposure 1-50 second, sun a little hazy. Printed on Willis & Clement's platinotype.

Third Prize.—Made on gloomy September day in residence attic, light from east window; exposure 10 seconds on Seed 26X plate.

FUTURE COMPETITIONS.

Competition No. 30.— Snap-shot pictures. Closes October 31.

Competition No. 31.— Landscapes. Closes November 30.

Competition No. 32.— Ray-filter pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.
2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

PRIZES.

First.— Books to the value of $5.
Second.—Books to the value of $2.50.
Third.— Books to the value of $1.
To be selected from our catalogue.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

RULES.

1. Write on one side of the paper only.
2. Be brief, sending less than one thousand words, if possible.
3. Never mind style—use the smallest words you know.
4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.
5. Write your name and address at the end of the article.
6. Mark the envelope "Literary Competition."
7. Preference given to practical articles; that is, those that tell "how to do things."

A PLEASANT SURPRISE.

The Bausch & Lomb Optical Company has been awarded the gold medal at the Paris Exposition for the best lenses, shutters and photographic accessories of American manufacture. This award is quite a surprise to them as they made no exhibit at the Exposition, the medal being awarded for the superior quality of the lenses, shutters and other accessories of the Bausch & Lomb Optical Company's manufacture used on the cameras exhibited by the various camera manufacturers.

THE G. Cramer Dry Plate Company, St. Louis, in order to insure its customers having fresh plates, from now on will label each box, fixing the time before which the contents should be used to make certain of getting the best results.

THE Tenth Annual Exhibit of the Toronto Camera Club will take place from December 11 to 15, 1900. For particulars apply to John J. Woolnough, secretary, 32 Cottingham street, Toronto.

EDITORIAL TABLE.

THE AMERICAN ANNUAL OF PHOTOGRAPHY, published by the Scovill & Adams Company, New York, is the first of the annuals to reach our desk. It aims at reproducing many of the noticeable photographs exhibited during the year and in one respect the editor must be complimented — he has evaded rather successfully the reproduction of most of the "horrors" that were labeled artistic by those who liked that sore of thing. The engraver and printer have done their work well. The literary matter is up to the usual average.

BY inadvertence, in describing "Modern Printing Processes" on page 237 of August issue, the price was stated as being 75 cents in paper. It should have been 25 cents paper, 35 cents cloth.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES, F.R.P.S.

CHAPTER X.

LANDSCAPE WITH FIGURES.

There can be no doubt at all but that the introduction of a figure, or figures, into a landscape view, may, under suitable conditions, greatly enhance its pictorial qualities, but it is a power which the photographer must exercise the greatest caution and restraint in employing.

It is rather a debatable point as to when a particular landscape subject with figures should be strictly regarded as such, and when it should be treated as a figure subject proper, and in our photographic exhibitions subjects which should, properly speaking, be placed in the latter category, are often admitted as landscapes. In competitive work this practice often operates rather unfairly, for it is an undoubted fact that the introduction of the human element into a landscape as a rule greatly adds to the attractiveness of the photograph, and when the interest in the figure predominates, creates in a landscape class an unfair advantage.

In dealing with the subject, therefore, we propose to treat it in a strictly legitimate way; that is to say, only to deal with the introduction of figures in so far as they are an accessory to, and in no sense a dominant feature of, the landscape into which they are introduced.

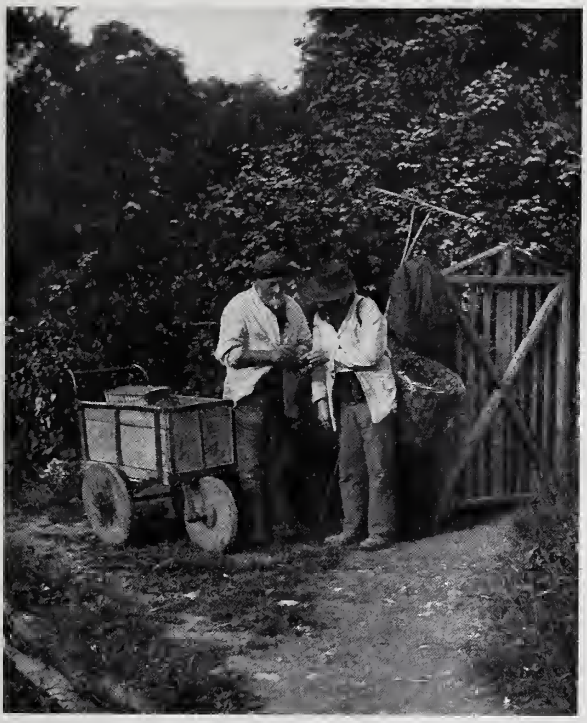

FIG. 31.

The introduction of a figure is useful and helpful in many ways, besides adding an element of interest to the landscape. For example, it will frequently afford us an opportunity of introducing a strong light, or a deep shadow, in

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* Copyright, 1900, by F. Dundas Todd.

some part of the picture where either the one or the other may be needed; indeed, by such a simple means as this, a fine picture may often be created from very poor materials.

We have insisted upon the interest in the figures being subordinated to the interest in the landscape, and perhaps it will be better to give a practical illustration of what we mean. This will be found in Fig. 31 and Fig. 32. In Fig. 31 we have a picture which on one occasion we entered in the "figure" class at an exhibition, but it was transferred to the "landscape" section by the selecting committee. In doing this we consider a mistake was made, because the whole sentiment and interest of the picture is absorbed by the figures, and the landscape portion of it is of entirely secondary importance. We should not call this a legitimate landscape subject, but essentially a figure study.

In Fig. 32, however, we have an illustration of the introduction of a figure subject into a landscape in such a manner that the interest of the former has not been allowed to overpower the latter, and although the figure is placed in the immediate foreground, it does not arrest the attention from all else, but remains simply an accessory, as it were, an aid to the general effect. But while not constituting the chief, or paramount, interest, the solitary waiting figure undoubtedly adds to the general effect, and its absence from the view would be a loss rather than a gain.

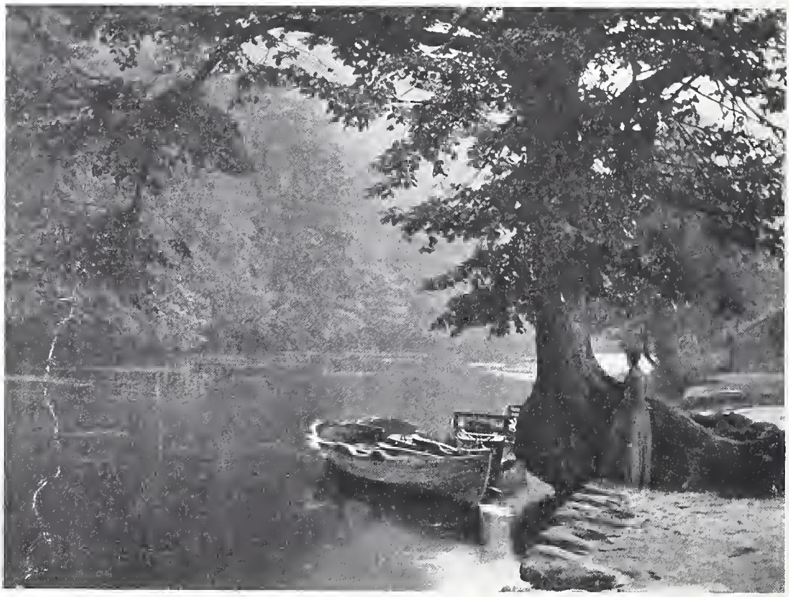


FIG. 32.

On the other hand, had the model been placed nearer to the camera, in a more prominent position, or had she worn a white, or light, dress, the result from a pictorial point of view, might have been very different.

In introducing figures into his landscapes with a view to enhancing the pictorial effect of the latter, the photographer will speedily realize the limitations and restrictions which photography imposes upon its votaries. Not only will he find the literal translation of the human figure, in the persons of those who serve as his models, and as given by the lens, often awkward, crude, and unsatisfactory, but he will, as a rule, experience the greatest difficulty in obtaining the services of suitable models.

Above all things would I urge upon him not to descend to the paltry subterfuge of resorting to shams; that is to say, employing people to masquerade in attire which they are not in the habit of wearing. Such a system nearly always betrays itself in the stiff, gauché attitudes, and the self-conscious, stage-player airs of those who act as the models. Have the real thing or none at all. If you think a young dairy maid, for example, would be an agreeable accessory in a farmyard scene, go forth into the country and find the actuality — do not be guilty of the enormity of getting your pretty town-dweller cousin to put on a sun-bonnet and pose as the milkmaid. These things, we are aware, have been done, and, by the ignorant or uncultured, have been applauded as works of art, and held up for imitation to the student. But happily for artistic photography, these things are passing and a purer, better and truer appreciation of the possibilities of photography, and of its limitations, is now becoming general.

When introducing figures into the composition, any tendency to incongruity must be studiously avoided, and at times this is a matter that will present no small difficulty. For example, we should not improve a picturesque piece of landscape scenery by the portrayal of a figure attired in the conventional costume of the day, in a prominent position in the foreground. Yet many otherwise clever photographers are frequently guilty of this practice, and thereby shock the artistic sensibilities of their painter friends.

Before introducing a figure always consider, first, whether the proposed addition is one that will really improve the composition, and, secondly, whether the figure (or figures) which it is intended to introduce are in complete harmony with their surroundings.

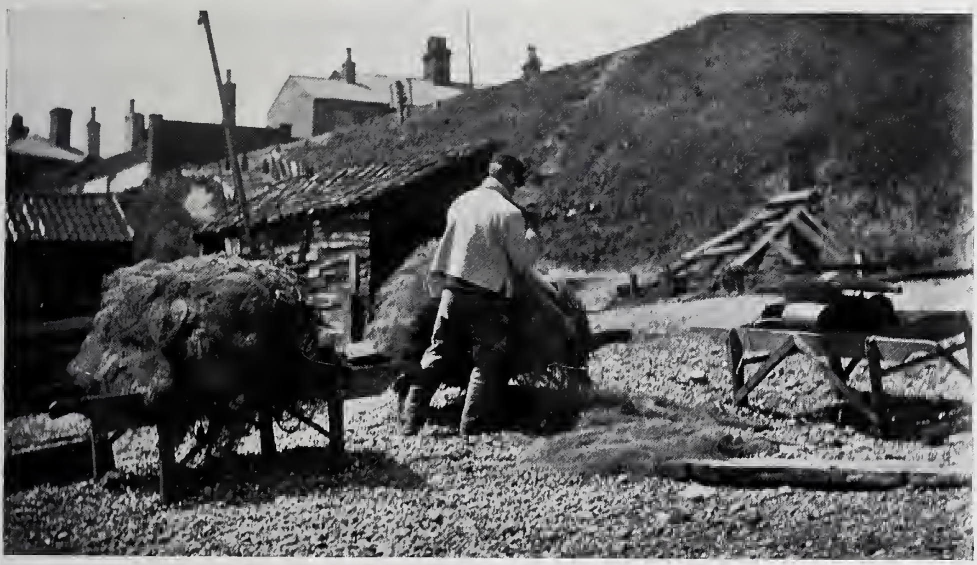


Fig 33.

The position which the figures are allowed to occupy will necessarily have a very important effect upon the composition. They must not, as we have already said, occupy a central position, or form the chief object of interest, or motive, of the picture, but should be so placed that, while contributing to the general harmony of the composition, they occupy a secondary, or subservient, position in relation to the principal object.

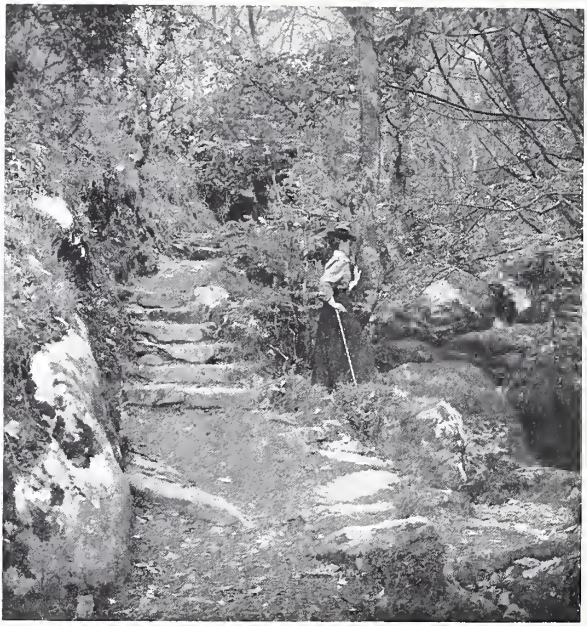


Fig. 34.

The figures introduced should be in harmony with their surroundings; for example, Fig. 33, we naturally associate fishermen with a marine subject, and they probably would, if introduced, enhance the pictorial effect of a seascape; but rustics on the seashore, and placed amid the paraphernalia of the fishermen, would probably strike most people as being incongruous, and a shocking exhibition of bad taste.

On the other hand, the fishermen would be equally out of place in a rural landscape, while the villagers would be quite in keeping with such a subject.

We would not entirely exclude the conventionally dressed model from our photographs, for under certain conditions we may, even with advantage, avail ourselves of its services, provided, of course, that we pay due attention to the precautions already referred to, and avoid perpetrating some glaring incongruity — such, for instance, as including in the foreground of a picturesque view a person clad in a frock coat and tall hat.

As an example of what is permissible in this direction, we may refer the reader to Fig. 34, in which the figure, though rather nattily dressed in everyday attire, does not seem out of place in the beautiful glen. We feel that it is natural to meet visitors under such conditions, and therefore are not oppressed by any feeling of the incongruity of the figure with its surroundings.

Again, in the next illustration, Fig. 35, we have a group of tourists in the conventional holiday-making garb of their kind, but we find them under circumstances in which we should expect to meet them, and, therefore, they seem not at all an inappropriate addition to a very picturesque view. We call this little picture "The First View of Helvellyn," and apart from whatever pictorial merit it may possess, it is of melancholy interest because it is no longer obtainable, the level of Thirlmere Lake having been artificially raised some forty feet, thereby entirely submerging the very ground on which the group of tourists stood.

It will be noticed that in composing this picture regard has been had to the tenets that we have endeavored to lay down in this chapter. The figures, although forming a pleasing accessory to the view, are yet subordinated to the general effect. This result has been arrived at by not placing them obtrusively in the immediate foreground, in which position they would have at once arrested the attention from all else; but, by carefully posing them in an easy and natural manner, in the middle distance, any undue prominence has been avoided, and the general result is, we venture to think, distinctly pleasing.

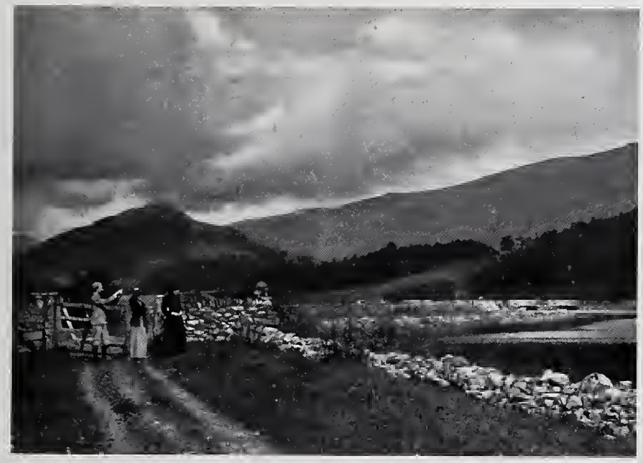


Fig. 35.

We have spoken of "posing," and a word or two upon that subject may not be without value. Of posing, however, in the stricter sense of the term, we do not here profess to deal, carrying us, as it would, beyond the scope of this series of articles; but in dealing with country people some difficulty will probably be met with in getting a natural and easy pose. The great secret of success, under such circumstances, is to put your models entirely at their ease, and the most effective way of accomplishing this is by abstaining from any attempt at posing them, or putting them into a particular attitude. A few minutes friendly chat, a pipe of tobacco in the case of a man, and an observant eye to note quickly when a natural and unaffected pose has been quite unconsciously assumed, will afford the readiest means of bringing about the desired result. Any unusual difficulty may usually be met and overcome by allowing the proposed model to engage in any occupation which is congenial and natural.

It may possibly be thought by some that we have bestowed an undue degree of attention upon this part of our subject, but we think, having regard to its importance, and also to the fact that so many fail when attempting to introduce figures into their landscapes, that we are more than justified in treating it in such detail as may prove of service to those who may be anxious to learn the reason of their former failures.

The Photo-Beacon "Exposure Tables" are guaranteed to be correct. Price, 25 cents.

BURKE & JAMES RAY FILTER COMPETITION.

The competition organized by Burke & James to show the good qualities of the ray filter manufactured by them provided us and a friend with a very pleasant afternoon's work on the first of October. It was our task to select the prize-winners from among the hundreds of prints submitted and we frankly confess it was no easy task to pick out the best and arrange them in order of merit.

The following are the awards made:

FLOWERS.

First.—W. F. Luick, 180 Ogden avenue, Milwaukee, Wisconsin.

Second.—C. T. Bush, Dubuque, Iowa.

Third.—A. W. Rice, Hayward, Alameda County, California.

LANDSCAPE.

First.—Henry Fair, Lewiston, Idaho.

Second.—W. W. Bissell, 91 Main street, Rochester, New York.

Third.—Gus. Horlen, 5127 Wentworth avenue, Chicago, Illinois.

Fourth to tenth (not arranged in order of merit).

Robert D. Stevens, 40 Mahl avenue, Hartford, Connecticut.

Arthur Anderson, Wahoo, Nebraska.

J. W. McCaslin, 5747 Drexel boulevard, Chicago, Illinois.

John B. Watson, Warsaw, Indiana.

Charles T. Springman, 1024 Fourth avenue, Detroit, Michigan.

Frank E. Foster, Iowa Falls, Iowa.

Adolph Dittner, Fort Dodge, Iowa.

Through the kindness of Burke & James we have been privileged to reproduce the best three in each class, and we fancy they will well repay study by our readers.

One point we wish to draw particular attention to, and that is the misconception held by many as to the purpose of a ray-filter. They seem to think that "to get clouds along with the landscape" is its highest aim. And so they underexpose the foreground and get thundery clouds that look like big bales of wool supported on the tree tops. This is all wrong. The purpose of the ray-filter is to help the photographic plate to render a subject *as the eye sees it,* and the eye rarely sees clouds on tree tops. We admit that we have seen the phenomenon twice during the past summer, and a thoroughly drenched skin on each occasion does not foster any desire to repeat the experience. But these clouds look like a big black curtain whirling along about a hundred feet above the ground at a great pace, whereas the clouds our photographic friends patronize are of the cumulus variety and are far away *behind* the trees, and ought to look there in the finished picture. In the first prize picture they are clearly behind the most distant mountains, and in the second prize photograph the sky recedes from the zenith to the horizon. The third prize picture shows the very same effect.

In the flower pictures our readers will readily notice the subtlety of the gradation from the purest white to the deepest black. The rose blooms, the green leaves, the cut glass, the white table tidy, the mother of pearl on the opera glass — all are beautifully rendered. In addition the composition of the poesy is very pleasing.

In "Gladioli" Mr. Bush tackled a very different subject. The flowers are mostly red, with yellow, pink or red markings, or cream colored. But he rendered them beautifully, more especially when we note that he made them on an ordinary Crown plate, using the Ideal filter. With stop *f*-45 he gave six minutes' exposure.

In "Daffodils" Mr. Rice scored high with the blooms, but he is less successful with the greens.

The Peoria Art League will hold its second annual exhibit in their rooms at the Public Library building, Peoria, Illinois, commencing Monday, December 3, 1900, and continuing for one week. Seven gold medals are offered for competition in as many classes. Residents of the State of Illinois only may take part in the competition. Full particulars from O. Manwarring, Room 11, Union Depot, Peoria, Illinois.

WHAT TO PHOTOGRAPH.

There are many experienced and more unexperienced amateur photographers, who are at times at a loss what to photograph.

There are besides the regular portraits, landscapes, architectural subjects, etc., plenty of other subjects right around one's own home, that will make interesting and good pictures if the average amateur has a little knowledge what they were. Your own people living at home with you, or near relations, such as father, mother, grandfather and mother, sister or brother, cousins or intimate friends, will make good subjects for pictures in the various ways of life. They will cater more to one's wishes and assume a more natural aspect than a stranger would. Some people when they are about to be photographed assume a stiff, staring and an entirely unnatural look; those had better be let alone for the time being. It is those who do not get excited and take things cool that make the best pictures. (This last sentence is applicable to the photographer also.)

The photographer is sometimes to blame for not getting a good picture when the opportunity is offered — either forgets to draw the slide, set the shutter, subject is out of focus, or takes too much time to focus or arrange the subject, thereby getting the subject out of sorts, and the opportunity is usually spoiled for a good picture.

For instance, have you a mother or grandmother who is old and gray. There is a chance for a good picture of her with her spectacles on, with knitting or other work of that description in hand. You will find she usually chooses a place where there is good light, which makes it the better for taking a picture.

There is father or grandfather sitting in the old arm chair reading a paper or favorite book, or smoking his pipe, or with child on his knee telling it a story.

Quite a beautiful picture can be made of a little girl ready for school, with a

Negative by H. Fair, Lewiston, Idaho.

FIRST PRIZE.

Landscape Class.

bundle of books or lunch basket on her arm. Take a side view with the face turned three-quarters to the camera, best taken with a drab-colored cloth for a background.

Or sister sitting at a small table on which are placed a teapot, pitcher and cup and saucer, she holding the cup in the hand and examining the contents critically.

Two girls or young ladies standing close together, one in the act of whispering to the other, and the other with an expression as though listening intently.

A boy with a bundle of papers under one arm, holding one paper in the hand extended, as though offering it to some one. The boy should be dressed rather shabbily, wearing a cap or slouch hat, pants held up by a string attached to one button, etc.

The Musician.—A man blowing a cornet standing in front of sheet music placed on a stand.

The Perplexed Musician.—A man holding a cornet in one hand and slightly stooping toward the music notes, pointing to the same with the other hand, as though in a state of perplexity.

A picture entitled "Still Life"—A small table upon which lie a violin and bow, a common tobacco pipe, a few sheets of music, and a music-stand, standing beside the table.

If you have any small darkies (negro children) around the neighborhood, buy a watermelon and invite them to eat it, previously arranging them in a suitable position. If rightly arranged this will make a fine picture.

The Young Doctor, arranged in two pictures.—No. 1, entitled, "Diagnosis." A little girl sitting beside a doll cradle, with a doll in the same. A little boy wearing spectacles, sitting on the other side of the cradle, holding the doll by the wrist and looking at a watch. No. 2, entitled "Writing the Prescription." The same boy and girl sitting beside the cradle, the little girl watching the doll in the cradle intently, the boy with legs crossed holding tablet and pencil in hand as though he were writing a prescription.

A lady poorly clad sitting in front of a sewing-machine, with one elbow resting on the machine, and chin resting on the hand, the eyes looking slightly downward, the face assuming a rather downcast expression. A bit of rather dull-colored cloth should also be placed under the needle of the machine. This picture, called "Despair," is rather difficult to produce, as it is hard to secure the right expression on the face, etc.

A small baby strong enough to sit upright in a wash-bowl and water, and a colored lady standing beside the same, with sponge or towel in the hand, giving the baby its bath.

A nice outdoor picture can be made of children in a goat or donkey cart; hedges or bushes will make a suitable background.

In rural or backwood localities many interesting and beautiful pictures can be made.

Two oxen yoked together and hitched to an old wagon, standing, or going slowly along the road, with the driver beside the team.

Feeding-time.—A boy, or girl with a pan of feed in the hand, feeding the various kinds of barnyard fowls, such as chickens, ducks, geese, turkeys, guineas, etc.

A long water-trough with a lot of horses or cows drinking from the same. This is best taken facing the animals, and placing the camera close, thereby getting large heads, but not too large.

A flock of sheep grazing in the meadow or resting in the shade of a tree; should be taken with a long-focus camera.

A little girl with sprinkling can in the hand watering the flowers.

The Fruit Thief.—Two boys sitting or standing under an apple tree, one of them having his pockets and hat filled with apples, offering some to his companion, who refuses to take any. To make this picture perfect it is necessary to train the boys for the purpose. It will be necessary for the one refusing the stolen fruit to assume a shrinking expression, as though absolutely refusing the proffered fruit.

To be more or less successful in making pictures it is quite necessary to have suitable backgrounds for the various subjects.

For instance, a little girl watering the flowers in the garden. It is well to have a background of plants or bushes, instead of an old fence on which a part of the day's washing has been placed to dry. Equally bad would be barrels, boxes, an ash pile, or other trash that usually accumulates in the backyard.

A fence in focus running straight across a picture, or an old stable sharp enough to distinguish every knot-hole are unsuitable backgrounds. If the picture be indoors, avoid bric-à-brac or fancy wall paper.

A. G. Graff.

POSTAL CAMERA CLUB.

Mr. Robinson, finding his business arrangements necessitate his moving around considerably, has decided to resign from the management of the organization, and has been succeeded by Mr. Henry Hall, Dongan Hills, New York. All interested in the work of the club should communicate with this gentleman.

ALEXANDER ST. CLAIR.

Old friends will regret to learn of the death of this old-time photographer, which occurred at Des Moines on September 25, after a lingering illness of many years' standing.

He was born in Edinburgh, Scotland, in 1828, and came to this country just before the outbreak of the Civil War, and although still a subject of Queen Victoria, he enlisted in the service of the Union as a private, but was promoted to be second lieutenant. After the war he returned to the photographic business, but in later years he was editor of the *St. Louis Photographer*. He leaves a wife and one son to mourn his loss.

Copyright 1899 by Geo. H. Hardy

Negative by George H. Hardy, East Lebanon, N. H.

SECOND PRIZE.

THREE GOOD IDEAS.

HOW TO MAKE A PRINT ROLLER.

If these directions are followed, as good a print roller can be made as any that is bought at a store. Any size can be made, but just to give you an idea of how they are made we will make a 4-inch one. This size is the most common, as it will do for a 4 by 5 or smaller print. First look around in your odds and ends for a piece of common fence wire (not barb wire) about eighteen inches long. If you can not find any go to a hardware store and they will give you a piece (or at least they did me); then go to a drug store or any store that keeps rubber tubing and get a piece four inches long and three-fourths of an inch in diameter. They will charge you about 5 cents for this. Then get a piece of wood about four inches long and make it round just so it will fit in the rubber tightly, and if you can drill a hole through the center, do it; but if you can't, just drill a hole about one inch long in each end of the wood. Then take and put each end of the wire in the holes and twist into any kind of a handle you like best, just so that the roller can revolve freely.

HOW TO USE SMALLER PLATES IN A LARGE PLATEHOLDER.

Get a piece of cardboard about the thickness of a plate and cut it the size of the plate your plateholder takes. Then cut out in the middle a hole the size of the small plate you want to use. Now get some tin about ⅛ inch wide and about ½ inch long and cut holes in each corner of the cardboard as shown in the diagram. Cut holes at *a*, where the dots are, and put the ends of the tin in the holes and bend on the other side. You have now a good kit.

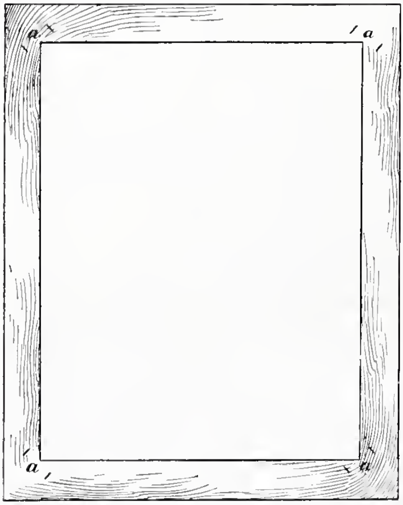


FIG. 1.

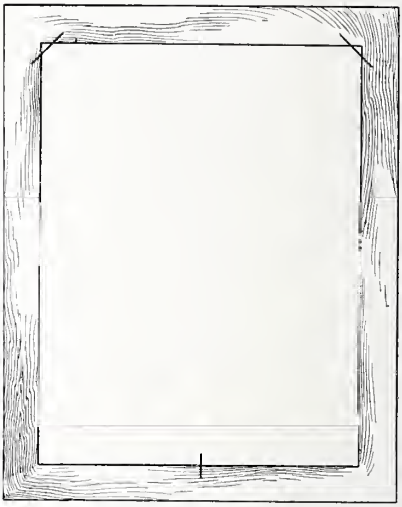


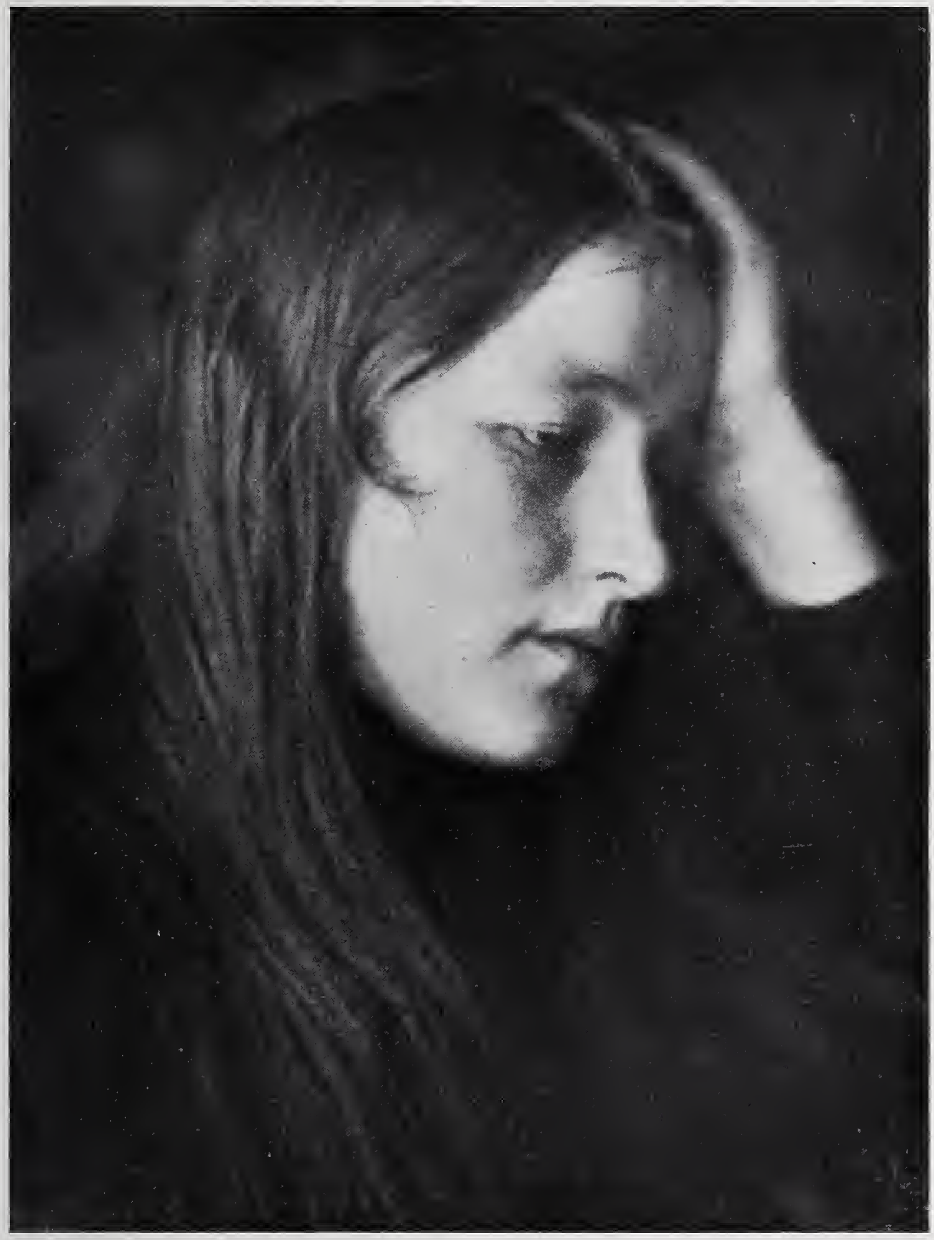
FIG. 2.

TO USE.—Put the plate in the center of the plateholder and then put the kit in just as if it was a plate. See that the plate is in the hole in the center and then proceed to take a picture just the same as if there was a large plate in the plateholder.

ANOTHER KIT.

Make just the same as the above kit with the exceptions that instead of putting the tin at all corners, just put them in the two lower corners. Then get a piece of tin ⅛ inch wide and ½ inch long. Drill a hole in the center and cut off a pin about one-eighth inch long and fasten the tin on the top part of the kit by clinching the tin on the other side. It should look like diagram. The plates are easier to put in with this, as they can be put in without taking the kit out.

MARTIN JOHNSON.
(Aged 14.)



Negative by Dr. F. Detlefsen, Chicago.

THIRD PRIZE.

REDUCTION.

Reduction is just as important as intensification in doctoring negatives in order to get better results from them in printing. It is perhaps more simple, and more gratifying results are obtained from it than from intensification.

I would rather reduce a dozen negatives than intensify one, for the result is so much better. Generally with care you can make an almost perfect negative by reduction.

Some photographers believe in over-development and then reducing, for in so doing they are better able to judge the proper printing quality than they can in developing.

It is claimed by some that over-developing and then reducing to the right density clears the shadows and removes fog.

I prefer Farmer's Reducer to any I have ever tried.

I.

Red prussiate potash	55 grains
Water	2 ounces

II.

Hyposulphite soda	1 ounce
Water	16 ounces

Keep No. I wrapped in yellow paper to prevent decomposition by light.

For use add one-half dram of No. I to each ounce of No. II.

The larger the quantity of No. I the more rapid will be the reduction.

The negative is first soaked in cool water for about one-half hour if it is a dry negative.

It is then immersed in the solution and as the high lights are attacked first they will be properly reduced before the shadows are touched.

Avoid strong light; rock the tray constantly; remove to running water as soon as sufficiently reduced; wash thoroughly after the reducing operation.

Local reduction is reducing a part or parts of a negative which requires a prolonged exposure in printing to bring out detail, which is often the case in the face of a portrait negative.

To reduce locally first soak the dry negative in cool water for ten or fifteen minutes, then apply the reducing solution with a soft brush, tuft of cotton, or soft pine stick, chewed on the end to make a brush of it. Be very careful to apply it to the part only that needs reducing, using the solution somewhat stronger than for total reduction by using a little more of No. I.

Silver stains may also be removed by first wetting the plate and then brushing the stains over with the reducing solution.

Over-printed prints can be reduced as successfully as negatives if all detail is not lost. Tone as you would a good print, fix in the fixing bath, then reduce the same as you would a negative.

It will look as good as if properly printed.

If you know clouds to have been in a negative of some picture you took, you can often recover them by reducing the cloud part of a negative. This solution will not keep well when mixed, so it should be thrown away.

W. Marshall,

24 South Porter street, Elgin, Illinois.

AURITHIOL.

Aurithiol (*Aurum-Thiosulphate*) is the name of a combined toning and fixing bath, in concentrated solution, that the Chicago Chemical Works has placed on the market recently.

It is said to be very rich in gold and to contain a new combination of fixing salts — the resultant bath yielding tones of great beauty and permanence on all makes of printing-out papers, both gelatin and collodion.

The Chicago Chemical Works' goods have established an enviable reputation for quality and effectiveness, and we are therefore inclined to believe that Aurithiol will do all that its manufacturers claim for it.

Write to them for their catalogue and be sure and inquire about their "Bright No. 9" flash-powder — a genuine novelty.

COMPARISONS ARE "ODOROUS."

BEING COMMENTS ON THE ENGLISH PHOTOGRAPHIC EXPOSITIONS.

There seem to be at last some signs of a reaction against the dark and heavy methods of exhibition furnishing. Light frames, light mounts, and light prints are becoming less exceptional. Nevertheless, the general effect of a gallery, when one first enters, is dismal and gloomy. One's spirits are damped on the doormat; so oppressive is the array of dark frames enshrining stodgy prints. If picture-makers would see to it that their exhibits were fresh and bright, rather than strong, there would be no need for any further means of making a gallery attractive. Their idea, however, is rather to get a thing as powerful as possible by means of dark color; and competition in this direction, forcing the prints up to exhibition pitch, lands us at a sort of funereal display.

Negative by W. F. Luick, Milwaukee, Wis.

FIRST PRIZE.

Flower Class.

In nature there is no need of this blackness; in the history of art there is no precedent for it; in the taste of today there is no demand for it. When photographers discover that Light is more than half of art; when they give up trying to pose as artistic "souls": when they look on their landscapes and portraits with healthy eyes, cleared of trick and mannerism, and with vigorous brains freed from that affectation which is "born of a morbid love of admiration"; then we may expect pictures that will tell us of life and of a sun in the heavens.

Many works are exhibited as portraits which in reality are not so. A portrait should show the mental, moral and emotional characteristics as well as the physical. For a long while the former were utterly ignored in the desire to secure good looks for the sitter; but that style of work has been so long surpassed that we look now as much to photographers as to the best painters to get the spirit rather than the letter. It will be a pity if portraits of the future take the form of anatomical studies and mutilated remains. Are we in for a series of faces without craniums and craniums without faces; of right-angled excerpts from ladies' physiognomy; back views, arms and necks? Commissions to photographers will sound strangely like orders to butchers, "A nice piece out of the back, please," or "I think I'll take a small shoulder — not too fat."

Many works at the Salon attempt to deny the soft impeachment of photographic origin. Some figure as crayon drawings, others as light charcoal touches on rough paper. Others, again, as wash, or pen and wash, drawings. There are a vast number of landscapes and portraits that appear to be seen through a glass darkly, or else beneath a huge semi-transparent canopy spreading out indefinitely in space. Affectation is rampant and finds expression in every possible way. Not a few natural solecisms, too, will jar upon the thoughtful mind. They are chiefly perpetrated in connection with cast shadows and with moons.

The Salon is the happy hunting-ground of the critic. He is kept perpetually awake by the delightful prickings of the thorns among the flowers from which he gathers sustenance. He is hurled into paroxysms of joyful indignation by the harmless attempts of poor unknown creatures making frantic bids for fame.

Things are rejected here not because they are not good enough, but because they are not funny enough! But the fun must be of such a sort that the uninitiated will take it for the lofty expression of great souls who dwell in "linked sweetness" in a home of mystery. The committee of the Salon, being shining lights in the photographic world, will not have mediocrity at any price. Of "bad stuff," be it ever so good, they will have none, but good work they distinctly prefer when it is bad, rotten even. Thus it comes about that the funniest of things they show have the evidences of power, knowledge and subtlety. Their idiocy is only idiosyncrasy run to seed. Originality is fostered as in a hot-bed, and artistic quality is so thick as to be actually in the way.

Now the members of the R. P. S. are poor honest folk, without a thought beyond doing their best. They all do it, and all their bests are as like as pins. They love propriety, and look askance on innovations. Their little harmless "tips" and "wrinkles" are begged or stolen one from another. They educate themselves by watching each other's work, and with them originality is at a discount. It follows that the usual and admirable thing fills their too capacious walls, but there is no fun.

This lamentable go-to-meeting British worth and virtue is reflected in the reviews. What the R. P. S. would have done without Mr. Steichen we scarcely know, and in our prayer of gratitude to him we may include the petition, "Please send more next year, only don't let them be too ordinary."—*Photography.*

The Camera Club, of Western Grove, Missouri, wishes to correspond with other clubs for the interchange of lantern slides. Address Frank G. Thompson, Old Orchard, Missouri, secretary.

A NOVEL CAMERA.

New York, October 6, 1900.

Mr. F. Dundas Todd, Photo-Beacon,
Chicago, Ill.:

Dear Sir,— I read with some interest the description of a camera exhibited at the Paris Exhibition provided with a focal plane shutter of novel construction, in the description of which the author expresses his astonishment at the fact that similar construction should not already have been thought of by others because of its simplicity. Hence it is that I beg to inform Mr. Cameron that I designed for one of the principal view photographers of this city a focal plane shutter working exactly as in the manner described in the article referred to. The shutter has been made, and produced work of great perfection. As the camera to which it was applied was not a magazine camera, but used with plateholders, it was not possible to make the surface carrying the slit graze the plate; but the parallel motion used to guide the shutter caused it to move absolutely parallel to the plate in the nearest possible plane to it.

Negative by W. W. Bissell, Rochester, N. Y.

SECOND PRIZE.

Landscape Class.

With regard to the statement concerning the manner in which light traverses a lens, the inventor is evidently wrong. You will admit that if optical constructors were not entirely aware of the manner in which light travels through a lens, calculating the lens mathematically would be an entire impossibility. The pencils of light which have been combined to a point in the plane of the focus of a lens do not stop there, but continue on their course, and for that reason of course cross each other again; but this crossing is entirely independent of the manner in which the rays traverse the different glasses of which a lens is built up.

Yours very truly,

C. P. Goerz,

per L. J. R. Holst.

HOW I BECAME A "CRANK."

Having decided that I wanted to learn to make pictures, I determined on a plan of action as follows: Not feeling able at the time to get as good an outfit as I wanted, I decided to improve the intervening time. To this end I made inquiries among my picture-making friends and arrived at the conclusion that the most practical thing to do was to follow one recognized authority. To this end I secured a copy of "First Step," and one of

"Second Step in Photography," one of a "Reference Book of Practical Photography," and "The Photo-Beacon Exposure Tables," which I studied faithfully, of course reading all I could get to read along this line, but keeping in mind all the time that The Photo-Beacon was my tutor. All this time I was talking pictures with my amateur friends, who began to come to me for information before I got my camera. Within six months I felt able to get a good, medium-priced outfit, also felt some degree of confidence in my ability to handle it. Having secured my outfit I proceeded to study it, my friends the while wondering how I could resist the temptation to try a shot.

At the end of a week, about 5 o'clock p.m., in July, I concluded to make an exposure. Then came the question of a subject. My wife is not as beautiful as she is good, therefore could not complain if I failed to get a beautiful picture. She would do.

The result of that exposure is still in my collection, and I am not ashamed to show it to any one, though I have been making pictures for over two years. This may have been chance, but subsequent exposures say otherwise. Within a few months the public had appreciated my pictures to the extent that they paid for every item which I had purchased for photographic use, except the naked camera, then I got tired of keeping accounts and don't know how I stand now. In my opinion, all this is due to following one good leader.

J. F. Shoemaker.

P. S.— This may not be a practical article, telling "How to Do Something," but it is strictly true, and in my opinion no better advice can be given.—J. F. S.

SAN FRANCISCO PHOTOGRAPHIC SALON, 1901.

The Mark Hopkins Institute of Art announces that, with the joint management of the California Camera Club, an exhibition of photographic art will be held in the galleries of the Institute in San Franciso, California, opening Thursday, January 17, 1901, and continuing two weeks.

The purpose of this salon is to bring together the best examples of the photographic work of the day, possessing the highest degree of artistic merit and pictorial interest.

The Mark Hopkins Institute of Art will award a first and second certificate of merit in each of the following classes:

Class 1.— Landscapes.
Class 2.— Marine.
Class 3.— Genre.
Class 4.— Portraiture.
Class 5.— Still Life.
Class 6.—Animal Studies.
Class 7.—Architecture and Interiors.

as recommended by a jury appointed by the Board of Directors of the San Francisco Art Association.

In addition to these awards *Camera Craft,* of San Francisco, offers a first and second medal in each of the different classes in accordance with the recommendations made by the aforesaid jury.

RULES AND REGULATIONS.

All pictures submitted for exhibition must be framed or matted under glass. They must also be addressed: "Photographic Salon, Mark Hopkins Institute of Art, San Francisco, California," forwarded at owner's risk, charges prepaid, and delivered at the Institute not later than January 1, 1901. Pictures to be returned at owner's expense. No charge will be made to exhibitors for space.

The title, the exhibitor's name and address, and if for sale the price must be upon the back of all pictures submitted. Nothing shall appear on the front of the picture except its title and the maker's name. Pictures exhibited must bear the name of the maker, and not the name of firms or galleries.

Full particulars on application to the Executive Committee of Management, care of California Camera Club, 819 Market street, San Francisco, California.

Negative by C. T. Bush, Dubuque, Iowa.

SECOND PRIZE.
Flower Class.

EDITORIAL NOTE.

E. & H. T. Anthony have just published an American edition of "A History of Color Photography," the work which has met with phenomenal success in Europe and which should be in the hands of every photographer as a work of reference on the subject even if they are not yet interested in this fascinating subject. It is the joint work of three well-known English experts. Mr. T. Bolas, so well known as a writer on photographic subjects, writes interestingly and exhaustively on the history of color photography from the time of Ritter and Seebeck in the beginning of the century up to the present time. Mr. Tallent writes on three-color heliochromy and Professor Woods' system with diffraction grating, which occupies the major portion of the work. The most interesting portion of the book is Mr. Senior's description of Lippmann's process of interference heliochromy, which is very practical and gives all the formulæ necessary to its successful working. We are sorry to see the American edition giving the credit to Professor Joly which belongs to the late Mr. McDonough, of this city, who was the first to work out the one-plate system of color photography, and hope to see this rectified in the next edition.

A SIMPLE STILL.

A common source of trouble and one generally overlooked by the photographer is impure water. The irregularity in the working of a developer, a box of plates, or a brand of paper can more frequently be traced to the water used than to the manufacturer.

A simple distillation apparatus can be made practically without expense which will be of sufficient capacity for the needs of the amateur. All that need be purchased is a piece of glass tubing about one-fourth of an inch in diameter and twenty-eight or thirty inches in length. This can be secured at most any drug store.

Take an empty ink bottle, bore a hole through the cork and after removing the head of a 32-caliber cartridge shell press it into the hole in the cork for a barrel. Pass through this some lampwicking and we have an alcohol lamp complete (a) Fig. 1.

Hold the glass rod in the flame of the

lamp about two inches from the end until it becomes soft, then bend at right angles, as shown in the figure (b). Eight inches from this angle heat and bend as shown at (c); then make a U-shaped loop about six inches in length and two inches in width (d), and finish by a final bend (e), and we are ready for business.

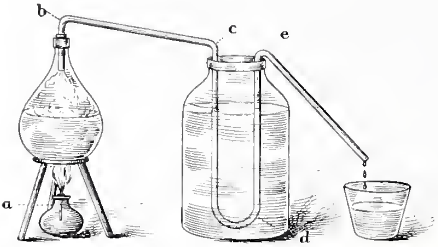


FIG. 1.

To distill, place the lamp under a small stand having an open center, place over the opening a piece of wire gauze or old window screen, and upon this a bottle or flask containing the liquid to be distilled. Fit the end of the tube (b) into the neck of the bottle so no vapor can escape except through the tube. Place the loop (d) in a fruit jar of cold water to condense the vapor and at the end of the tube place a vessel to catch the distilled water. If the soot formed is no objection an ordinary lamp may be used, or heat may be secured from a stove. M. L. BISHOFF.

TO THE MEMBERS OF THE POSTAL CAMERA CLUB.

DONGAN HILLS, N. Y., Oct. 10, 1900.

On this date the Album starts on its first round. Dues and prints of several applicants have not arrived, but it is thought better to start with those now on hand, and let the others come in later on, as all those who came in several months ago are undoubtedly anxious to know how it seems to be a member of a postal camera club. Thirteen members have qualified and the Album will go to each in turn, as follows:

No. 1.— Henry Hall, Dongan Hills, N. Y.
No. 2.— Chauncy Goodrich, Gifford's, N. Y.
No. 3.— A. Rasmusser, Jr., 56 Pine street, New York city.
No. 4.— J. T. Duncan, East Orange, N. J.
No. 5.— Miss C. M. L. Lewis, Box 75, Falmouth, Mass.
No. 6.— L. D. White, M.D., Uxbridge, Mass.
No. 7.— W. M. Bonar, 6 Lawnview avenue, Cleveland, Ohio.
No. 8.— Miss Luella S. Fuller, Wolf Point, Mont.
No. 9.— George V. Robinson, Kalispell, Mont.
No. 10.— H. Kern, 4 North Locust st., San Francisco, Cal.
No. 11.— R. L. Rodman, Lott, Texas.
No. 12.— Oliver McEuen, Shannondale, Mo.
No. 13.— L. L. Potter, Cairo, Ill.

The Album, however, is not strictly an album, as it was found that photograph albums go at fourth-class rates — 1 cent per ounce — while photographs are third-class, at 1 cent per two ounces. Besides, we do not care to pay postage on a pound or two of cover and leaves, if a much less weight will answer our purpose. The prints have therefore been lightly gummed on thin cards, 5 by 8 — the size available at the moment — and mailed between heavier cards. On the first round, which is largely experimental, the criticisms and other written matter will go by separate enclosure, as suggested by a member, in order to avoid letter postage on the prints. In this connection it is suggested that each member use a uniform size of paper for criticism, and that each sheet be mailed flat, which will render the handling of them more convenient. The size should be 5 by 8.

Each member will exercise extreme care in addressing and mailing the two packages at the same time, and to the next in order on the list, which will reduce to a minimum the liability of delay in the mail.

I will briefly outline the points that have been suggested in connection with the organization of the club, and it will be well for each member, as soon as possible after receiving this letter, to send me his or her idea on the subject; and as soon as all have been heard from it will be a simple matter to formulate a set of rules for the government of the club.

As TO THE ALBUM.— It is desirable that each member shall see all the prints, and also all criticisms of all prints. To accomplish this, it will be necessary for the Album to go twice, or nearly twice around.

Criticisms may be made on a separate sheet for each print, or several prints may be criticized on one sheet. In the first case, the postage will be high; in the second case, each member will have to copy for himself whatever is of interest. *Which shall it be?*

AS TO THE SIZE AND SHAPE OF THE ALBUM.— It will probably be thought better to keep the general style of the first Album, but a somewhat wider card would show the larger prints to better advantage, and would not seriously increase the postage. The present cards are held together at one end by a McGill fastener, but I find that this form of binding will scratch the prints in sliding one card over another in order to see the prints. It would be much better to have leaves hinged to a stub, as in the ordinary album, but No. 1 is too busy to make them. However, when we have decided upon the size and shape of card to be used, each member might make his own leaves, and send prints mounted to No. 1, when the stubs could be punched and fastened together by him. *What do you think?*

AS TO FUTURE PRINTS.—The interest of the members will be maintained more surely if a print is sent each

Negative by Gus. Harlin, Chicago, Ill.

THIRD PRIZE.

Landscape Class.

month, and surely any member of a camera club should be able and willing to make at least one print per month. It is suggested that on or about the 15th of each month, each member send a print to No. 1, who will start the set along about the first of the following month. This will relieve us from any worry as to whether the Album will get around on time, and will also allow each member the necessary time to look over each album without undue haste. There should, however, be a limit as to the time that the Album shall remain with each member. *What is your opinion?*

As to Subjects for Prints.— Each Album may be made up of anything and everything, or each Album may have one class of prints only. It will probably be advisable to have all prints in one Album of one class — landscapes, street scenes, portraits, genre, flowers, animals, snap-shots, etc. Some may object that they can not do one or another class, but this is just where the value of the club comes in. A rule of this sort will be a spur to effort. Personally, the writer has never made a flower picture; but, if that class were called for, he would get hold of some flower or other, and he would get some sort of print for the occasion. And while it would not be an exhibition picture, it would at least be a photograph of a flower, and the care with which he would go at it would probably result in a considerable addition

Negative by A. W. Rice, Hayward, Cal.

THIRD PRIZE.

Flower Class.

to his photographic knowledge, and the general result would be distinctly an advance, which is what we are all looking for.

As to Criticisms.— All prints should be criticized by all members. Never mind whether the criticisms are correct or not. That is not the point. Remember that doctors often disagree, and that in this case the patient won't die. For a starter tell us what you like, or don't like about each print. Then, as far as you are familiar with the rules of art, tell us where we have failed. Don't spend much time in looking for the good points in the prints, praise never excited great effort anywhere. What we all wish to know is— How might the print be better? Let us *know* that our prints are full of faults, and then cordially thank our neighbor for reminding us of the things that we have overlooked, or did not know. Perhaps some member will suggest a series of points for criticism of each print — mounting, trimming, subject, focus, lighting, composition, lines, balance, detail, etc.

As to the Number of Members.— How many shall we have? Thirteen are now on our list, and No. 1 begins to think that even as few as thirteen means lots of work. There are about ten applicants to hear from, and it is quite likely that the majority of them will wish to qualify. *What shall be the limit?*

As to Constitution and By-laws, Officers, Etc.— No. 1 is altogether too busy to tackle this problem, which is not strictly photographic; but, as the question has been brought up by a member, he suggests that those who are interested can draft a scheme which can be sent around the circle, and the decision of the majority will rule.

I believe that the foregoing suggestions cover all points brought up by members, but there is, of course, a wide field still uncovered. Let each member put on his or her thinking cap and see if he or she can not devise methods of making the club interesting and profitable. Send in your suggestions. And *remember* that the success of the club will be the greater, or the less, in proportion to the active or the perfunctory interest of the members.

The Postal Camera Club *lives*. Fostered by earnest zeal and united effort, long may it flourish!

Henry Hall.

Home Hobbies, Arts and Crafts

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CONDUCTED BY FRANK H. BALL AND GEORGE J. FOWLER.

INSTRUCTORS OF MANUAL TRAINING, CHICAGO.

Start the box (Figs. 4 and 5) by taking a piece of half-inch board, probably a soap box could furnish the stock, 2½ inches wide, and as there may be some practice work in sawing, it had better be about twenty-four inches long.

Mark the working face and plane a working edge straight and square with the working face. Mark a line on the face two inches from the working edge, and plane the other edge to this line. This is a longer and thicker piece to plane than the previous ones, and of course is more difficult to plane accurately, and it may be advisable to refer to the directions again.

For the purpose of gaining a little practice in sawing with the back-saw, proceed in the following manner: With the handle of the square held tight against the working edge, mark a knife line across the face about one-quarter inch from the end of the piece, and squaring from the working face, extend the line down both edges.

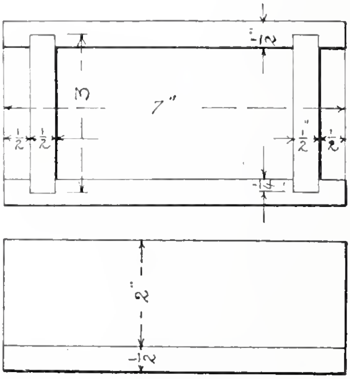

FIG. 4.

Saw this off, using the back-saw and bench-hook, and sawing on the outside of the line like Fig. 13 A. When entirely off, test with the square from both the working face and edge. If it is not perfect, saw off another piece and control the saw better. If the second is no better than the first, read the directions again and saw another. When this is perfect, do the same thing on the other end of the piece. Now mark off the lines for the joint (Fig. 6), which must of course be exactly the same width as the thickness of the stock used and one-half inch from each end of the piece. Mark a line on each edge one-quarter inch from the working face to mark the depth of the cut and saw down to the depth line. As the portion between the lines is to be chiseled away and leave an opening exactly the same width as the thickness of the stock, the two saw kerfs must be on the inside of the lines, one line being followed on the left-hand side of the saw while the other must be watched at the right-hand side as in Fig. 13 B.

In chiseling the piece away, cut a diagonal groove the full depth, as at A in Fig. 6, with the bevel side of the chisel uppermost and the flat side nearest the line. Use the chisel from both edges of the piece toward the center. After the two V-shaped grooves are made, the center triangular piece is to be cut away, handling the chisel in the same manner as before.

The sawing may be hard to do accurately, and should be tested with one of the small pieces that was sawed off when the original end was squared. The fit should be so tight as to require heavy pressure with the hands or light tapping with the mallet to force it in place. If it is not such a good fit, saw it off and make another joint. If a good fit is secured, make a similar joint on the other end of the piece. Of course, the lines across the working face must be accurately drawn or it will be impossible to saw a good joint.

The length of the side pieces may be squared and sawed off, care being taken that they are both the same length, and similar joints sawed in the other ends of both pieces.

In sawing the end pieces, care should be taken that one end is square with both the working face and working edge before the length is sawed.

The bottom piece is to be the same length as the sides and must have both ends square. The width may be a trifle more than that of the box and planed off after the bottom is nailed on.

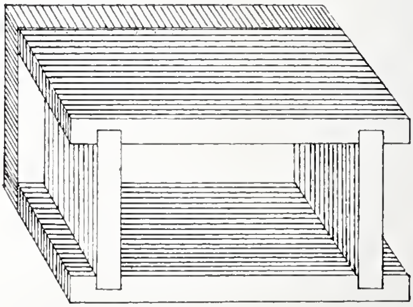

FIG. 5.

The purpose of any joint in any work is to give strength, and it should be remembered that a loose fit is no joint at all. Nails should not be necessary.

As we have said, planing and sawing accurately to measurements constitute the most important part of most ordinary work, but preparation such as accurate, careful measurements are more important, inasmuch as no amount of skill in working to a line could make a nice piece of work if the line were in the wrong place.

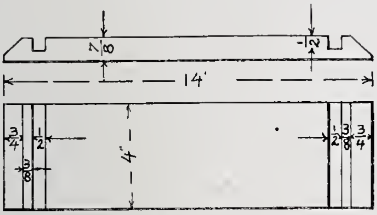

Fig. 7.

There is another good sawing exercise shown in Fig. 9, the working drawings of which are shown in Figs. 7, 8 and 10.

The baseboard is similar to the last exercise except the beveled ends. If these are planed, the last edge will be almost sure to break or split, so it will help matters to chamfer one corner as indicated by dotted lines in Fig. 10. This may easily be done with a chisel. Then the plane may be used without danger of spoiling the work, if the stroke is directed toward this chamfered corner. The ends of upright pieces will give quite a different sawing exercise.

Take a piece of half-inch stock, long enough to make both ends, and a little extra to allow for squaring — say 8¾ inches long. Plane a working edge. Mark and plane to the width of four inches. Square both ends with the back-saw. Measure the length (four inches) from each end and saw them off. Draw the design, using knife lines, and square the lines around the edges and upper end. With the back-saw, saw down the line marked "1st," Fig. 8; then the one marked "2d," and then "3d" and "4th." Turn the piece around and saw "5th," "6th," "7th" and "8th." Do the same on the other side of the piece and repeat for the opposite upright. This will give good practice in sawing to a line which extends in the same direction as the saw cut, both with and across the grain. The whole should be sandpapered before gluing together, and should receive three coats of shellac after gluing together. The ends could be decorated with carving or pyrography with a good effect.

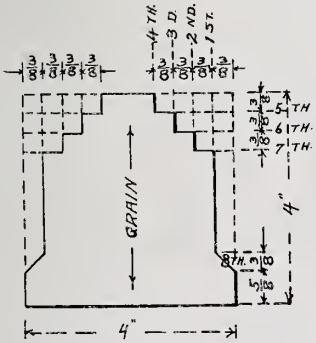

Fig. 8.

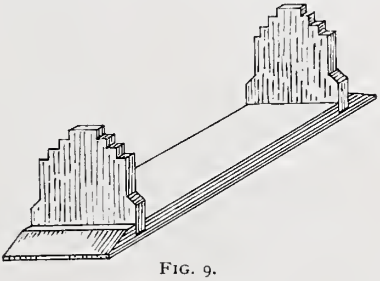

Fig. 9.

The baseboard of the book-rack is somewhat more difficult to saw the joints in than is the box shown in Fig. 5, as it is a wider piece, but should not prove hard if the box exercise was faithfully executed.

Figs. 11 and 12 show a very neat design for a rack to hold toothbrushes or souvenir spoons. It could be modified to accommodate any number by changing the width, but we would not advise putting the openings any closer together. In making this, the stock should be long enough to plane both pieces at once to the desired width. Then it will be found best, after squaring one end, to locate and bore the holes in the part which will afterward

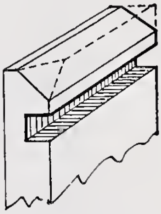

Fig. 10.

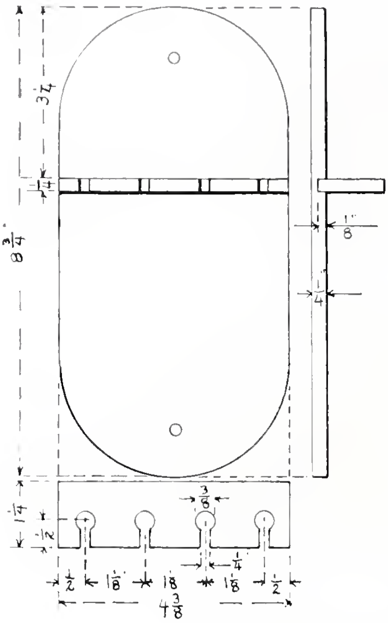

FIG. 11.

be the shelf-piece. The reason for this is that there is not so much danger of splitting the wood by the boring of the holes if it is done before the piece is sawed off.

In boring the holes there is a tendency toward splitting when the auger-bit comes through the piece. There are two good ways to prevent this; one is to withdraw the bit when the spur or point is through and finish boring from the other side. The other way is to put a piece of smooth wood behind the piece, clamp both tightly together in the vise and bore straight through into the piece of scrap wood. The small pieces between the holes and the end should be cut away with the back-saw, as a knife is liable to split the wood. Now the shelf-piece may be sawed off, the remaining piece made the proper length, and the ends rounded on a radius equal to one-half the width, and cut with a coping-saw or knife. Mark and saw the joint in the same manner as on the previous exercises.

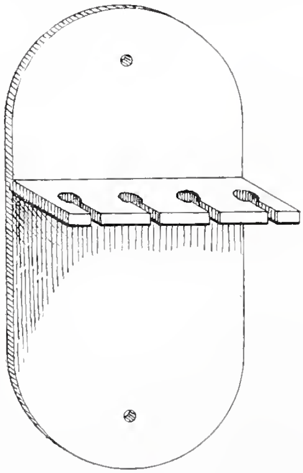

FIG 12.

It had better be secured to the wall both top and bottom to prevent any tendency to swing, and should be decorated in some appropriate manner.

Possibly a photograph cut in a circle could be mounted under the shelf with good effect, in which case the hole could be lowered until it came in the margin under the photograph.

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL.
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of THE PHOTO-BEACON COMPANY.

Unless otherwise directed, subscriptions will commence with the number issued during the month of receipt of subscription order.

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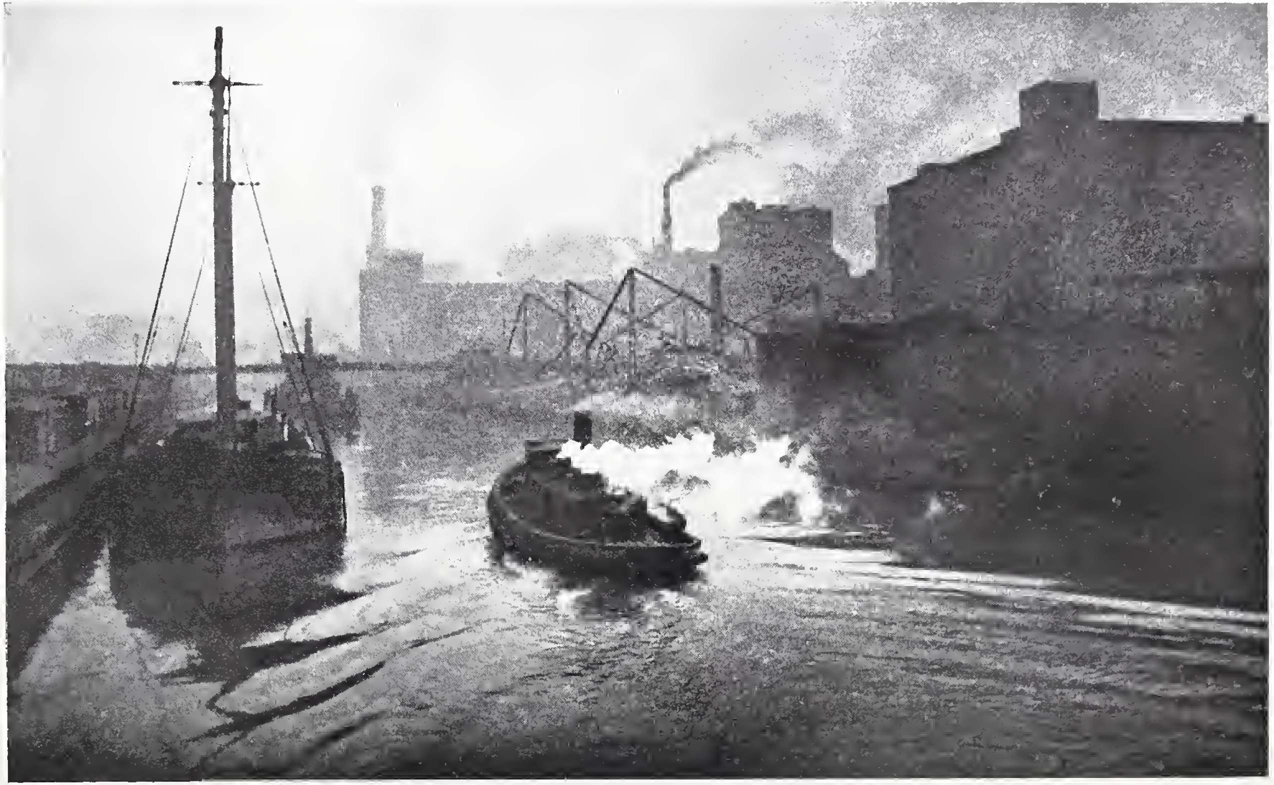
Subscribers advertising secondhand apparatus for sale or exchange, special articles wanted, help or situations wanted, *one insertion free.*

To insure insertion in any particular number, copy for advertisements must be received not later than the 20th of the month preceding.

All communications relating to THE PHOTO-BEACON should be addressed to

THE PHOTO-BEACON COMPANY,
TRIBUNE BUILDING,
CHICAGO, ILLINOIS.
Eastern Office: 80 Wall Street, New York.



Negative by J. B. Gorton, Denver, Colo.

ON CHICAGO RIVER.

(First Prize.)

THE

PHOTO-BEACON.

EDITED BY F. DUNDAS TODD.

VOL. XII. DECEMBER, 1900. No. 12.

PAST AND FUTURE.

With this number of THE PHOTO-BEACON ends the twelfth volume, and so from the editorial standpoint this year is past. This also ends the seventh year of my occupancy of the editorial chair and I can assure my readers it has been an exceedingly pleasant one. They have been kindness itself in expressing their opinion of the journal and I have tried to keep up the quality of the matter from the first number to the last. A few readers in speaking of the January issue hazarded the opinion that I could not keep up the pace I had then set, but one and all have lately written to say that they thought I had improved. I know I have tried to, and the fact that every month has seen a bigger demand for the magazine indicates that the matter pleased many people.

I propose to make THE PHOTO-BEACON for 1901 a record-breaker, and for the first time in my editorial career I will lift the veil and tell my readers what I have arranged for them. I started off with the one idea that I was going to have the very best that money could buy and that I would not grudge the price if I got the right kind of matter, and I think I can honestly say that during 1901 I will pay each month for contributions more money than all the other photographic journals in this country put together.

As I mentioned last month I have been exceedingly fortunate in securing the services of Mr. J. H. Vanderpoel, head of the department of figure painting and lighting in the Chicago Art Institute, to contribute a series of twelve articles on "Portrait Posing and Lighting." This is the first time in the history of photography that a man of such eminence has been induced to write for photographers, and I think my readers may look forward to a big treat. Mr. Vanderpoel has a big reputation as a teacher and as an analyst of pictorial principles, and I know he is going into this new field with great interest and vigor.

For close on a dozen years I have watched the outcome of the experiments on development that Mr. Alfred Watkins has been conducting, and I am proud to say that I was the first photographic editor to accept his conclusions and recommend them. On every hand he was laughed at when first he propounded his theories — to-day no one denies his conclusions. He is unquestionably the greatest living authority on the subject, and he has agreed to tell PHOTO-BEACON readers all about it in a series of articles.

"Modern Photographic Printing Processes" will be dealt with by Mr. Louis A. Hoyt. Beginning with blue paper he will carry the reader through all everyday processes up to and including platinotype. This is Mr. Hoyt's first appearance as a writer, but my readers know by this time that I have always had good luck in selecting greenhorn authors, and this time I am certain I have made no mistake. Mr. Hoyt has an experience of twenty years behind him as a printer, and is now working in the experiment room of a photographic paper factory, so he has had plenty practical experience. His literary style is very lucid and is straight to the point.

Mr. John A. Hodges has agreed to contribute a monthly European letter, telling us what is new in the Old World.

He is secretary of the Royal Photographic Society of Great Britain, and has his finger right on the photographic pulse, so his letters will be interesting.

"My Experiments" will be the title of a monthly series by E. M. Miller, who has been a regular contributor during the year, and J. Edgar Ross, one of the most graceful writers we have in America, and whose contributions have been too seldom seen in the journal, is to write on "Little Troubles."

For fifty-two years Mr. J. F. Ryder, of Cleveland, Ohio, worked behind a camera, and recently he has retired from active business. I have secured him to write his reminiscences, which will appear under the title of "Voigtlander and I," and I can promise a treat. Mr. Ryder's personality, as everybody knows, is a most loveable one, and his writing is just like himself, in its easy style, whether he is treating of plain facts, telling a humorous story, or touching with tender hand the pathetic chords that respond in all of us.

This, then, is my programme for 1901. Do you like it? If you do, tell your friends about it, for I have one ambition still unrealized. I want the biggest circulation of any photographic journal in the world, and a fifty per cent increase would give it to me for certain.

I need hardly say a word about your own subscription. If it expires this month please attend to it at once, for most of you know that no one's name is carried on the subscription list one day longer than the date of expiring. So that if you wish the January number the only way to make sure of getting it is to send in your money at once.

May the first year of the new century be a pleasant and a prosperous one to all of us.

F. DUNDAS TODD.

THOUGH Scotch, the editor was able to see the subtle witticism in the Columbian Photo Paper Company's advertisement. Do you?

A PHOTOGRAPHIC ENCYCLOPEDIA.

To clear out the balance of the copies on hand, Andrew J. Lloyd & Co., 323 and 325 Washington street, Boston, offers to send a copy to each reader of THE PHOTO-BEACON on receipt of 20 cents to cover cost of mailing expenses. Full particulars will be found in our advertising pages, and we simply assure our readers that they will not regret taking advantage of this offer, as many of the articles are well worth the money. The article by ourselves is on flash-light work, is very plain and practical, and should be welcome to most of our readers at this season. The stock on hand we know to be limited, so we recommend immediate application.

TRADE NOTES.

NOTE the new idea in adjustable plate-holders advertised by Warnica & Co. in this month's PHOTO-BEACON.

ROTOGRAPH paper is the name of a new "gaslight" paper just put on the market in this country by a German firm. They tell all about it in their advertisement.

THE New Jersey Aristotype Company, manufacturers of Albuma paper, in order to increase its facilities has removed its plant from Bloomfield, New Jersey, to Nepera Park, New York.

THE Novelty Photograph Holder just introduced by the A. & E. Spencer Manufacturing Company is a good thing. It will hold up the photograph perfectly, but will not scratch the furniture, and you will find everything stay just as you fix them. The price is low enough. Full particulars in advertising pages.

THE Rochester Optical & Camera Company has just got out a new camera, "Pony Premo No. 15," which ought to be the very thing for a Christmas gift. It is a beautiful little instrument with every movement that one can wish for, and an excellent double lens with Victor shutter. And yet the price is only $15. A few years ago the same instrument would have been cheap at five times the money.

ARTISTIC LANDSCAPE PHOTOGRAPHY.*

BY JOHN A. HODGES.

CHAPTER XI.

SUBJECTS AND THEIR TREATMENT.—EXPRESSION, ATMOSPHERE, ETC.

I have already, incidentally, referred to this important matter, but it is one that fully deserves our complete attention. I have reminded you that your photographs, if they are to be considered pictorial, must possess *motive*, therefore you will see how necessary it is that you should pay due attention to the selection of subject. Although it is quite true that in this respect the photographer has by no means the freedom of the draftsman, yet he has abundant scope for the exercise of his skill and need never be at a loss to find suitable material.

As a rule, the simpler the subject the more effective the result. The crowding of unnecessary details into the composition should always be avoided. A single tree, or at any rate a single group of trees, will probably provide a far more satisfactory composition than a whole plantation or forest. The use of narrow-angle, or long-focus, lenses, as I have already pointed out, will to a large extent prevent us from falling into error in this direction and at the same time enable us to impart dignity and impressiveness to our representation of the subject. Above all things, avoid a servile imitation of the work of others. Nature in all her moods, smiling, grave or gay, unfolds her charms before you and it is for you to interpret them in your own way, using all the skill which you possess. By all means study the work of your contemporaries and try to appreciate their aims and motives, but even if you are tempted to work in the same district, or on the same class of subject as other workers, endeavor as far as you can to avoid any imitation of their methods. Study the subject well and in your treatment of it get as far away from any existing rendering as you possibly can. We have, nowadays, "schools" in photography, as we have in other branches of artistic work, but the student will be wise if he dissociates himself from any such influences. In our opinion they make more for evil than for good, in that they tend to check individual thought and effort, for as a rule we find the weak many are content to blindly worship, follow and imitate the strong few who lead them.

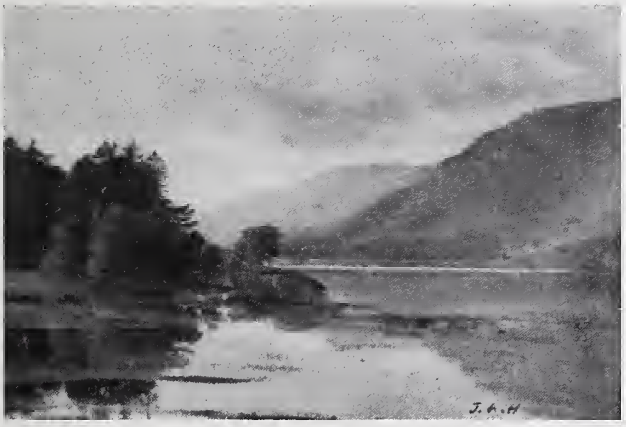


FIG. 36.

There is ample field for originality both of subject and treatment open to the photographer. Artistic landscape photography is as yet, I fully believe, in its infancy, and we shall see in the future, with the introduction of new means and methods of working, results produced that would at the present time be deemed impossible of attainment. To take a single instance, but by no means a solitary one, no photographer has yet succeeded in giving us an altogether satisfactory rendering of mountainous scenery. Photographs of mountains are, of course, familiar enough, but their dignity, vastness and air of mysterious grandeur has not yet been adequately presented to us by means of photography. Surely such a subject may be deemed worthy of all the skill and genius that any one of you can bring to bear upon it.

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*Copyright, 1900, by F Dundas Todd.

The faculty of searching for and finding subjects is undoubtedly to some extent a matter of temperament, as indeed in an equal degree is the manner of their treatment. I have noticed, as doubtless most of us have, that the fairest scenes in nature entirely fail to impress some individuals, while to others their contemplation affords the most exquisite pleasure, and between the two extremes there is a fairly long gamut, at any portion of which we may find our own place, reader, and according as it be far up or low down so will be our ability to find material and give it suitable expression in our photographs.

In considering the treatment of a landscape subject, the faithful rendering of atmosphere is all important. Faulty composition, or even an uninteresting subject, may be entirely condoned if the sense of atmosphere is brought vividly home to the observer. It is in reality the pictorial photographer's sheet anchor, and, being so, no effort should be spared by him to infuse this quality into all his productions. The quality we call "aërial perspective" exerts a most extraordinary influence on the appearance of all mundane things. To practically demonstrate this, make the following simple experiment: Take a couple of black focusing cloths, those being articles usually in the possession of every photographer, or, failing these, two black coats. Place one a couple of yards from you, the other some twenty or so yards away, and stand in such a position that they appear to come into juxtaposition with each other. If you were told to paint these two coats you would probably think you could do so with the same brushful of color — why, they are black coats, and all black coats must be black! But a moment's observation will teach you what a great diminution of strength the few yards of intervening space between the two coats makes in their apparent strength. I say "apparent strength" because we know that both coats are equally black, and possibly cut from the same piece of cloth, the difference in tone being due to the intervening air producing what is called "atmospheric effect," or a sense of distance.

To obtain this quality all sorts of expedients are resorted to by photographers, such as focusing near planes in the picture, using large stops and thereby throwing the distance out of focus, and the like; but by far the most satisfactory method of securing it is to make the exposure under favorable atmospheric conditions, that is to say, when there is a sufficient amount of moisture present in the atmosphere itself to produce, without artificial aid, the natural effect desired. Possibly the damp, foggy atmosphere of England is a potent factor in the production of those charmingly liquid atmospheric effects which are so often found in English landscape work, and it may be that the clearer and drier atmosphere of America, or at all events of some parts of it, is the reason why similar qualities are sometimes lacking in the productions of American workers.

The lighting of the subject, or rather the direction of the source of light at the time of exposure will also play a most important part in the rendering of atmosphere, or the infusion of that quality into the photograph. Select any broad, open bit of country in which the various planes are removed from each other with a fair degree of distinctness and observe the appearance of such a scene when the sun is behind you and the lighting is coming from your back. Foreground, mid-distance and distance all seem equally distinct, the lighting is flat, solid and wanting in luminosity. If a photograph were taken under such conditions, as unfortunately, many are, it would show similar characteristics in an, if possible, intensified degree. But view the same scene earlier or later in the day, when the sun is nearer the horizon and its direction more to the right, or left, or even in front, and the difference in its appearance will be striking to even the most casual of observers. While the foreground will be forcible and bold in its play of light and shade, the different planes will appear to recede or retire as the distance increases, and the whole effect will be luminous and atmospheric, qualities which we may secure in our photograph by carefully timing the exposure and exercising due skill in the development of the negative.

The importance of securing atmospheric effect can not be overrated, and time and trouble spent in endeavoring to obtain it should never be deemed wasted, for it does not matter how carefully arranged and effective the composition of a picture may be, if it lacks the mysterious, indefinable charm which we are wont to call "atmosphere."

You will infer from what I have already said that the actuality can not always be obtained at command by the photographer, and to secure it may mean the expenditure of much time and the exercise of no small amount of patience. As an instance of this I may refer to the view of Loch Voil, in which, I think, the sense of atmosphere is fairly well expressed. To secure that effect, however, I had to wait for several hours. There was no doubt about the composition, the point of view selected gave as good a "line" effect as could be desired, but everything was bathed in bright sunlight and appeared hard and quite lacking in the quality that I wished to suggest. Toward evening, however, the lighting improved, and a soft mist rising from the water greatly aided the atmospheric effect which was alone wanting to make the subject well nigh perfect.

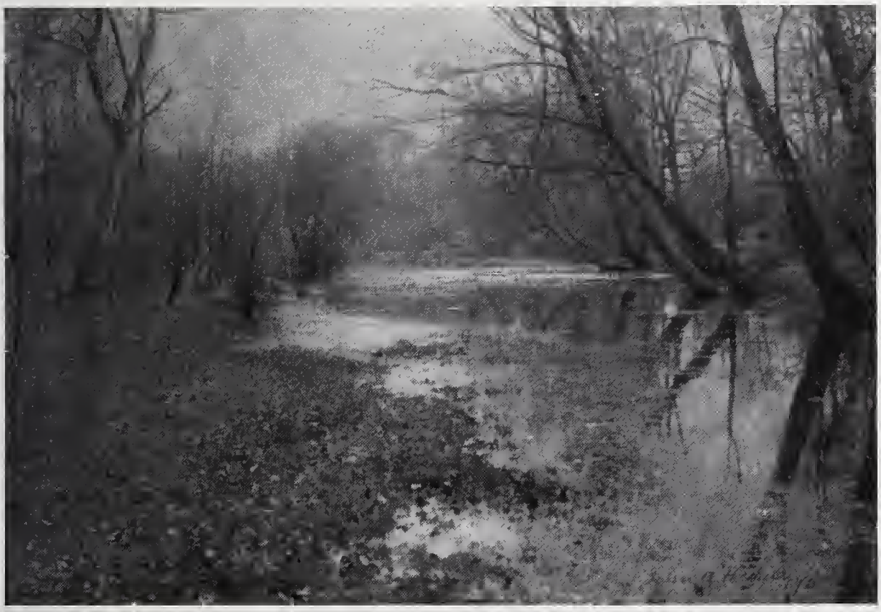


FIG. 37.

The other subject was found at Burnham Beeches, and actually first attempted on a clear, bright spring day, but the birch trees and the dense undergrowth looked so bitingly crisp and obtrusive that I at once destroyed the negative and made a second attempt under more favorable conditions of weather, with the result shown in the illustration. A great deal of trouble, some may think, but nothing good or satisfying can be obtained without incurring trouble, and a single good subject is better worth obtaining than a score of merely ordinary ones.

THE COVER COMPETITION.

Those who sent in suggestions for this competition may be under the impression that we have forgotten all about them, but such is not the case. We made a short list of three subjects and then set them where we could see them regularly day by day to see how they would wear. The wisdom of this became evident, for the one that caught our fancy and that of our artist friends at first as being the best, gradually lost its hold, while the one we considered second grew on us.

The prize of $25 is therefore awarded to O. C. Beacham, Dayton, Ohio.

Francis A. McCloskey, Brooklyn, New York, sent in the design that first caught our fancy, but to do it justice would necessitate the cover being printed in three-color half-tone work. It has magnificent possibilities, but a 10-cent magazine that appeals to a limited class of readers can not afford to spend over $100 a month on presswork alone for the cover. The money would be better spent on the reading pages.

Miss Emma J. Davis, Racine, Wisconsin, holds third place for a design that is just a little bit old-fashioned in its style.

The winning design is remarkable for its simplicity, and we think our readers will like it.

IF you are interested in making photo-buttons, read the advertisement of the Broadway Camera Exchange.

PICTORIAL COMPETITION NO. 30.

A very large number of pictures were entered for this competition, but the average quality was rather indifferent.

The judges made the following awards:

First Prize — J. B. Gorton, care of car accountant's office, D. & R. G. R. R., Denver, Colorado.

Second Prize — James E. Taggart, Delaware, Ohio.

Third Prize — H. D. Oberholzer, 197 Twenty-fifth street, Chicago.

PARTICULARS OF WINNING PICTURES.

First Prize — Taken with pocket kodak as Mr. Gorton was passing through Chicago in the spring. Enlarged to 6 by 9 on a Banner plate, and printed on Mellin's Etching Matte. Mr. Gorton adds: "I enjoy especially Mr. Hodge's articles on 'Artistic Photography.'"

Second Prize—Made on Stanley No. 50 plate, Stop No. 8. Printed on Carbon Velox.

Third Prize — Taken September 26, 1900, in open field; 11 A.M., on New York Record plate; Stop No. 4; exposure 1-50 second; developed with Metol-Hydrochinon; printed on Carbon Velox.

FUTURE COMPETITIONS.

Competition No. 33.— Pictures of children under seven years of age, not necessarily portraits. Closes January 31.

Competition No. 34.—Lantern slides; any subject. Closes February 28.

Competition No. 35.— Snow pictures. Closes March 31.

Competition No. 36.— Interiors. Closes April 30.

Competition No. 37.— Branch of a tree without leaves. Closes May 31.

Competition No. 38.— Domestic animals. Closes June 30.

Competition No. 39.— Genre pictures, or pictures that tell a story. Closes July 31.

Competition No. 40.— Branch of a tree with leaves. Closes August 31.

Competition No. 41.— "At Home"

Portraiture, that is, portraits not made in a studio. Closes September 30.

Competition No. 42.— Snap-shot pictures. Closes October 31.

Competition No. 43.— Landscapes. Closes November 30.

Competition No. 44.— Flower pictures. Closes December 31.

RULES.

1. There is no restriction as to the number of pictures to be sent in. On the print there should be written the title and the sender's name and address, but nothing else. Accompanying, a letter or postcard should be sent us, giving full particulars of date, light, plate, stop and exposure given; also the printing process.
2. Mark outside of package with number of competition. Ordinary letter rate must be paid where descriptive matter accompanies prints.

PRIZES.

First.— Books to the value of $5.

Second.—Books to the value of $2.50.

Third.— Books to the value of $1.

Any books, on any subject, or if preferred, any article we can buy in Chicago.

LITERARY COMPETITION.

From the articles submitted for competition closing October 15, we have accepted the following:

First Prize — Charles Diehl, Chicago.

Accepted (not arranged in order of merit) — W. Marshall, J. F. Shoemaker, M. L. Bishoff, A. G. Graff, George F. Gavitt, Grant H. Otis, J Ernest Hounsom, L. W. Tillinghast, William E. Brown, H. E. Pumphrey, D. D. Smith, F. R. Smalling, Emma L. Williams, Mary E. Flenoy, Gilbert J. Miller, William Bullock, A. G. Graff, Dr. F. Detlefsen.

LITERARY COMPETITIONS FOR 1900.

For the best practical article received on or before the fifteenth day of each month we offer a prize of $5 cash.

For all other articles accepted we will pay $2.50 cash.

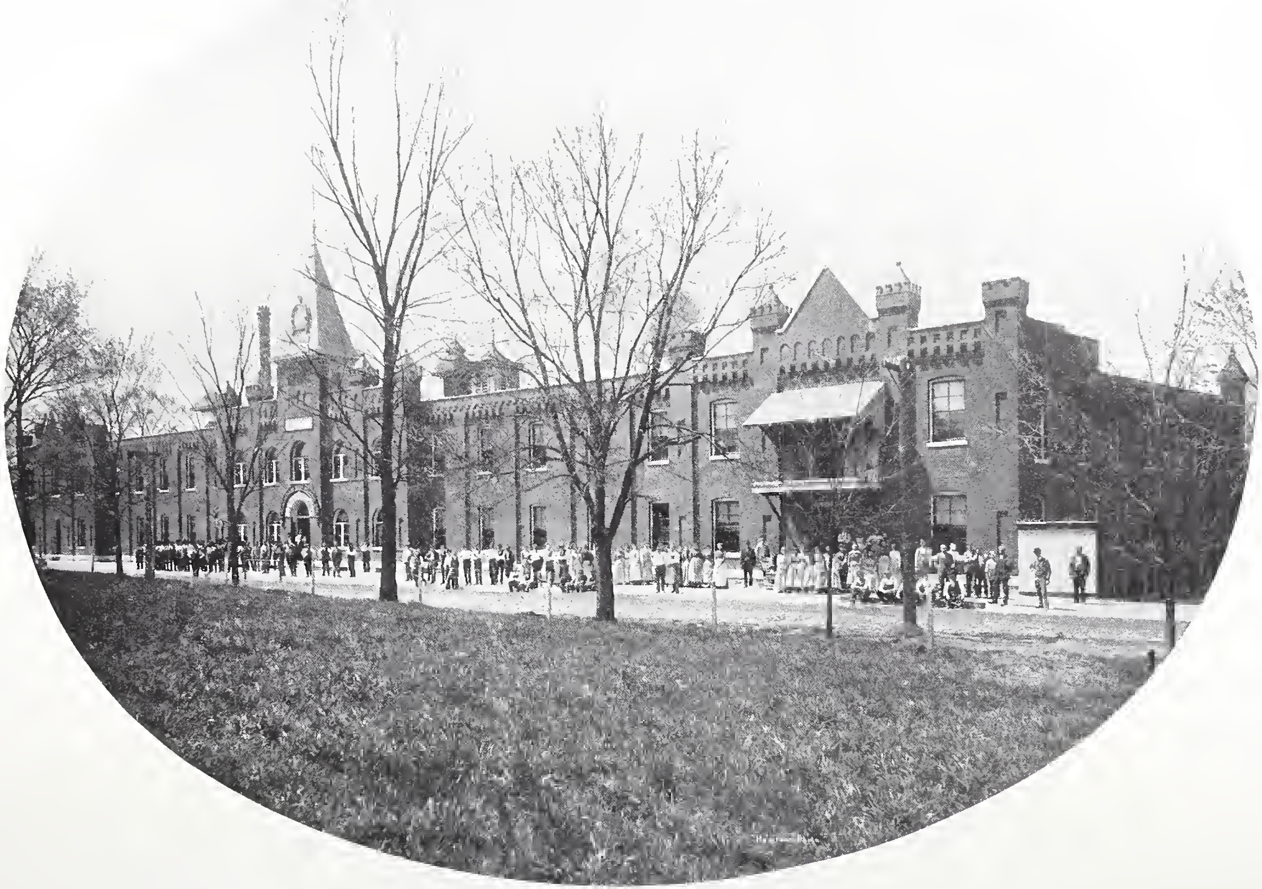
RULES.

1. Write on one side of the paper only.
2. Be brief, sending less than one thousand words, if possible.
3. Never mind style—use the smallest words you know.
4. If a drawing will make points clearer, send it. Don't worry if it be rather crude; we will put that right.
5. Write your name and address at the end of the article.
6. Mark the envelope "Literary Competition."
7. Preference given to practical articles; that is, those that tell "how to do things."

HOW A DRY PLATE IS MADE.

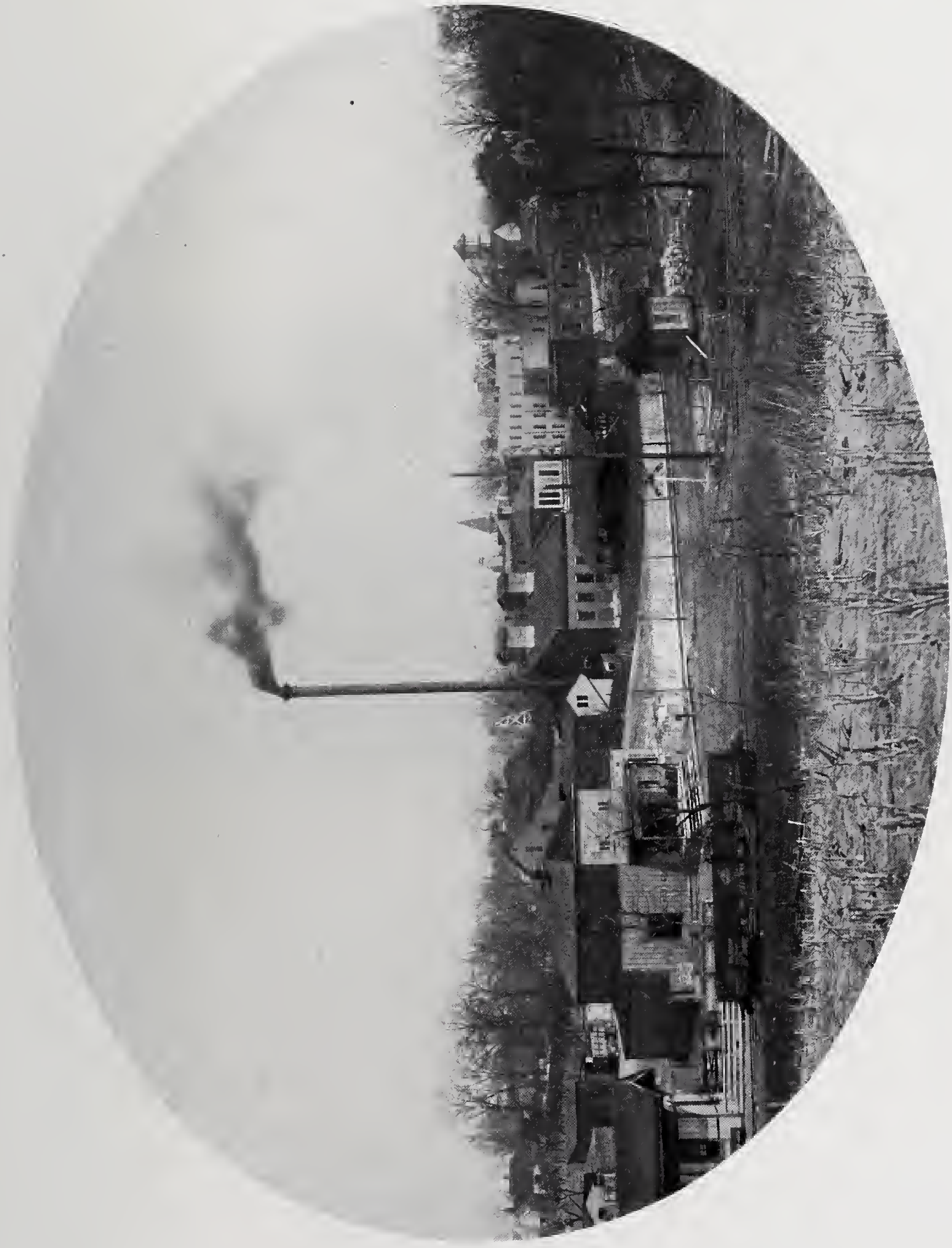
Shortly after I took up photography as a hobby a friend and I whiled away such leisure evening hours as we had — and they were not very numerous— one winter in an endeavor to make a collodion printing-out paper. I can not claim we were very successful, for although we frequently got paper that gave passable prints, yet invariably there was something lacking and just as fast as we modified our formulæ to get rid of one disease we originated another. The pleasure of pursuit is the reward of the vanquished, and even if we did not succeed in making a good article we got what we principally wanted, and that was the fun that comes from playing with something new. We also had some idea of trying our hands at the manufacture of dry plates, and proceeded to read up the literature of the subject, but fate ordained that the following winter should find us thousands of miles apart and so our proposed experiments were never begun.

I was fortunate enough in 1894 to be allowed to go through the factory of the M. A. Seed Dry Plate Company, and I need hardly assure my readers that it was an occasion of great pleasure and satisfaction to me, for I saw done on a very large scale what we had intended to try on a very humble one. Since that date I have been through a



FRONT VIEW.

Factory of M. A. Seed Dry Plate Co., Woodland, Mo.



REAR VIEW.

Factory of M. A. Seed Dry Plate Co., Woodland, Mo.

dry plate factory at least a dozen times, and I think I enjoy every such experience even more than the one preceding. I fancy my readers would be much like myself in this respect, and while making the round of the Seed factory a few weeks ago to see the much increased accommodations that had recently been added, it struck me that possibly a brief description of how a dry plate is made might not be unwelcome to them. We all know how easily a photographic plate can be spoiled, a moment of carelessness, just a dash of recklessness, and it is fit for the rubbish heap. If my readers realized the excessive vigilance that is characteristic of a dry plate factory, possibly they would be a trifle more careful and a little less reckless.

So far as the routine of making a dry plate is concerned there is great similarity in all factories. The points of difference lie in matters not noticeable by the average visitor, such as in the formula, the kind of gelatin, the method of preparation, not to speak of the indefinable something that seems to belong to the factory, to the building, rather than to the brains of the workers. Since, then, the mechanical part is so similar, if I describe the procedure of one factory it will practically stand for all, and since it was the Seed factory I last visited I will try and carry my readers along with me in a tour of the grounds.

The M. A. Seed Dry Plate factory is situated at Woodland, Missouri, about nine miles from the city of St. Louis. Pure air and pure water are very essential to the successful production of a dry plate, and this is found at Woodland in abundance. The village is a consequence of the presence of the factory and the company is very careful to see that its steam boilers consume their own smoke, so the atmosphere is just as pure as it would be were it in a state of nature. But pure air is not pure by any means, and so every cubic inch of it that enters the factory is filtered no less than three times before it is considered fit to associate with a dry plate.

Four different kinds of water are used in the plant. Distilled water is essential to the preparation of emulsions and this is provided by a large still which has a capacity of 1,600 gallons a day. For washing emulsions a very pure water is found about sixty feet below the surface in a bed of sandstone. This is collected in an underground pond one hundred feet long and five feet deep, and is brought to the surface by a pump. Two artesian wells provide a plentiful supply of water for ordinary purposes. One, 1,160 feet deep, is a brackish water that is excellent for cooling purposes, as it does not form a crust on the pipes, but only a soft deposit that can be removed with a brush. The other, 900 feet deep, provides a water that is good for boiler use and for washing the glass used in the manufacture of plates. This well has a capacity of 100,000 gallons a day.

I need not say a word about the offices in the building, but will at once proceed to follow the processes in the manufacture of a dry plate. There are two starting points — the glass room and the gelatin room — the support and the vehicle for the sensitive silver bromide. I find the manufacturer invariably starts off with the glass room, possibly because it is always on the ground floor, and I will follow his example.

The glass used in a first-class dry plate factory is of the finest quality, and must be free from bubbles, sand specks, scratches and crookedness, etc., and be just of the proper thickness. Such a glass is not manufactured in this country, and has to be imported from England and Belgium, where certain factories make a specialty of its manufacture. Its original cost is pretty high, and when a big tariff — which in this case protects nobody — and transportation is added to the original price it makes this necessary part of a photographic plate a really expensive article. The glass comes in cases containing one hundred square feet each, and in about forty different sizes. This necessitates an immense amount of glass being kept in stock.

A very large space is needed for accommodating such an enormous amount of glass; in fact, three buildings are devoted to this purpose, each being in different parts of the grounds so that in case of fire some may be saved.

From the storeroom the cases are carried on cars to the unpacking room. No less than 1,000 feet of track is needed for the cars.

On being unpacked the glass is loaded on low trucks and run on a table covered with steel plates to the examining room. Oak was primarily used for the table but the trucks soon tore it up and so the hard metal had to be adopted. In the examining room each plate of glass is carefully overhauled for flaws.

From the examining room the glass goes to the acid baths, where it is soaked for 2½ hours to destroy all adhering matter. After this bath the sheets are rinsed in pure water, loaded on a truck and run to the substratum room.

Here we first see machinery, and at this point it may be mentioned that all the machines used in this room and in the coating room are designed and made on the premises, and all are run by electric motors.

In the substratum room the glass sheets are placed on the scrubbing machine, which first gives them a thorough washing. An endless belt travels the length of the machine and the glass is placed on this sheet by sheet at one end. It travels toward the other end and passes through a small chamber in which are scrubbers. Jets of water play upon it and the result is a chemically clean piece of glass. A little further on the sheet passes under the substratum coater. The purpose of this is to secure an absolutely clean and a good adhering surface for the sensitive emulsion. Both negative and positive celluloid films are coated here exactly as are the glass plates. After being coated, the sheets of glass are put on racks to dry. From now on every precaution is taken to prevent the entrance of dust into the rooms. After drying, the glass is again carefully examined.

After examination the glass is put on racks and carried to a room where it is left to attain the proper temperature. Here it is kept in closed compartments so as to make doubly sure that no dust can reach it.

We will leave the glass for a little and start at the other beginning I

Negative by James E. Taggart, Delaware, Ohio.

DINNER TIME.

(Second Prize.)

spoke of — the gelatin room. This is located on an upper floor and does not look much of a place, only open racks where are stacked up pound packages of gelatin. But when I was informed that there was at that moment $18,000 worth of that article in stock my interest quickened. I always considered gelatin to be a cheap commodity, but I learned that there are gelatins and gelatins. The brand used here costs $1 a pound in big lots, and I am assured the selection of a suitable kind is rather a difficult matter, for each season of the year necessitates the use of a certain quality and it takes years of experience to find out just what grades to use at the particular time. Although American gelatin manufacturers have long tried to make a grade suited for photography they have up to now been unsuccessful, and so every pound of gelatin used by both plate and paper manufacturers in this country is imported from the continent of Europe.

The travels of the gelatin are short and less varied than that of the glass, for it goes straight to the emulsion room, where it is dissolved with the requisite amount of distilled water, and has the bromide salt and the silver nitrate added to it.

I need scarcely say that from the moment of the addition of the silver nitrate to the gelatinous mass all ordinary light has to be shunned and that from now on all operations are carried on in a weak deep ruby light.

From the emulsion room the emulsion is taken to the coating room in a tank and placed on the machine where it is kept at the proper temperature by an electric heater.

Each coating machine is fifty-four feet in length, but only a very small part is visible, as three-quarters is under cover, which consists of a cooling room to set the gelatin. In this inner room are no less than 1,400 feet of frost pipe.

Endless bands run the whole length of the machine. At the one end, the plates of glass are placed on the traveling bands and are carried toward the inner cold chamber. Just before entering, the sensitive emulsion flows over the plates, and an instant later they are carried into the cold chamber where the emulsion is chilled, and of course sets. On making their exit at the other end of the machine they are taken off the belts, placed on racks and carried to the drying room.

After drying the plates are examined for defects, and if without flaw are packed into boxes. These are placed on trucks and run into the labeling room.

In traversing the coating, drying and examining rooms one goes largely by faith, as practically everything is in complete darkness, only here and there a ruby light is visible, and one is led by the hand from one point to another until he really begins to wonder where he is at. But in the labeling room we again reach broad daylight and a welcome sight it is to the stranger. Nimble-fingered girls in dozens are all around us busy labeling the boxes and making them ready for the market. As soon as the labels are dry the boxes are put into cases and are ready for the market.

In the testing room we found a couple of employes testing the emulsions. Each one is tested no less than four times, twice during process of manufacture, once before coating and once after and before packing, so that there is little chance of a bad batch of plates getting on the market. A reputable firm can not afford to let a bad lot of plates get on the market, as it means a loss of just so many customers, and what is worse, loss of their confidence.

Having followed the manufacture of a dry plate from first to last let me give some figures, in addition to those already stated, that will indicate the great proportions to which photographic industries have attained. To carry on their business the Seed company has one main building with a floor space of about 100,000 square feet. Surrounding this are subsidiary buildings, consisting of engine rooms, machine shop, blacksmith's and tinner's shops, pipefitter's, painter's and carpenter's shops, paper-box factory, packing-box factory, as well as the factory for manufacturing developers — these giving a total of 40,000 square feet of space. No less than six acres of ground are necessary for the various buildings.

Enormous quantities of printed matter, in the form of labels, also wrapping paper and thick chip board for making boxes are on hand.

There are two Sterling boilers of 300 horse-power each to provide power for the machinery, and electric generators capable of producing up to 155 horse-power. Two fire pumps, equivalent to four ordinary fire engines in total capacity, serve as a protection in case of fire, and every employe, it may be said, has his allotted task should a fire originate. Three ice machines are able to turn out sixty-two tons of congealed water a day.

From 150 to 175 people find employment in the factory, and in connection with this item it may be stated that no less than thirty-five of them own their homes.

Separate dressing-rooms are provided for the males and females, and two large dining-halls are necessary for their accommodation at meal times.

While every precaution is taken to prevent fire and to successfully cope with it should it break out, provision is made for successful working should such a calamity occur by having every part of the plant in duplicate.

I wish I could find space to give details of the making of the boxes in which the plates are packed, but must content myself with saying that a dozen machines attended by as many girls turn out thousands of pasteboard boxes every day.

As illustrating the thoroughness of the firm in all it undertakes I might point to the introduction of the developer department, which originated as a protest to the common sale of cheap and impure chemicals for photographic use. Here nothing but the very purest materials are used and as a consequence there is less complaint about faulty plates.

Gentle reader, it is up to you. A photographic dry plate is a creation that has been delicately nurtured and carefully reared. Please don't mar it by careless handling and gross mismanagement.

F. Dundas Todd.

SNOW PICTURES.

The snow picture season is now with us, and once more photographers will be wrestling with the problem of how to secure detail in snow and in dark trees. The intense light reflected by snow-covered objects contains a very abnormal amount of violet and ultra-violet light rays, which act with extreme vigor upon all kinds of dry plates. The Bausch & Lomb bichromate ray filter entirely absorbs these rays, making the image which falls upon the sensitive plate a harmonious one, as to the comparative chemical activity in the various parts of the picture. Such being the case, it is just as easy to photograph the detail in a mass of snowflakes as in a pile of stones. The foreground and distance are filled with their properly modulated lights and shades, giving naturalness and perspective to the view.

Information and pictures showing the result of photography with and without ray filter can be obtained by addressing the manufacturers of the bichromate cell, Messrs. Bausch & Lomb Optical Company, Rochester, New York.

MAUDE ADAMS IN "L'AIGLON."

R. H. Russell, 3 West Twenty-ninth street, New York, has just issued from his press a very handsome souvenir of Maude Adams in her new part. It consists of eighteen excellent photographs of scenes in this famous play, and we can commend it as one of the finest souvenirs we have had the pleasure of seeing.

The Columbia Photo-Supply Company offers bargains in standard cameras.

Note the picture competition organized by the *Amateur Pointer,* advertised in this issue.

NOTES FROM AN AMATEUR'S WORKSHOP.

I.— MY ATTIC STUDIO.

If you will follow me, kind reader, and ascend two flights of stairs to the roomy attic of my residence, you will behold a studio as simple and modest as you may never have entered before. No costly draperies, rugs and oil paintings, no elaborate backgrounds, chairs and reflectors. One fairly large window, facing east, supplies the necessary illumination. This window (see Fig. 1) has six lights of about 3 by 1½ feet each. Three roller curtains from above can be lowered or raised as may be necessary to regulate the light of the upper half of the window. The lower half has three dark curtains that can be pushed to one side or the other. These six curtains permit of easy manipulation and make it possible to admit or obscure the light at any portion of the window and to distribute it to any part of the sitter or the room, as may be desired. The subject may be placed at either side of the window, or facing it in the center, so as to receive the light either from the right or left side, or full in the face. A great variety in lighting may thus be attained. To supply the top light a large white sheet is suspended horizontally just above the window, parallel with and about seven feet above the floor. As a rule the light is not very strong, large shade trees being in front of the house. But when it appears necessary to soften the light, especially for portrait work on bright days, white cheese-cloth is placed directly in front of the window. Two other small windows are about twenty-five and fifty feet away from the large window; the light from these is not utilized. Reflectors are seldom used, except on dark days or for full figure studies. A white sheet nailed to a wooden frame serves the purpose. Of backgrounds I have no great variety, but make them up when needed to suit color of dress and complexion of sitter. A clear white as well as a flat black background appear objectionable. But the black one may be so located as to reflect some light, and the white one can be so placed as to be partly shaded. A plain background that is focused to show folds and texture of cloth with microscopical sharpness appears to me very distasteful. Often I use an old drapery and have the figure of the cloth appear indistinct on the picture. If there is need for a cloudy background, a piece of white canvas is used and lampblack rubbed unevenly over it with a tuft of cotton (as done in Fig. 2), or

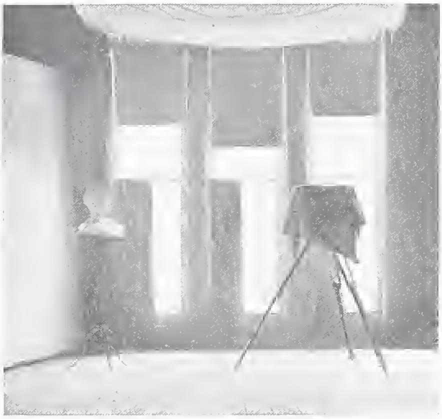


FIG. 1.

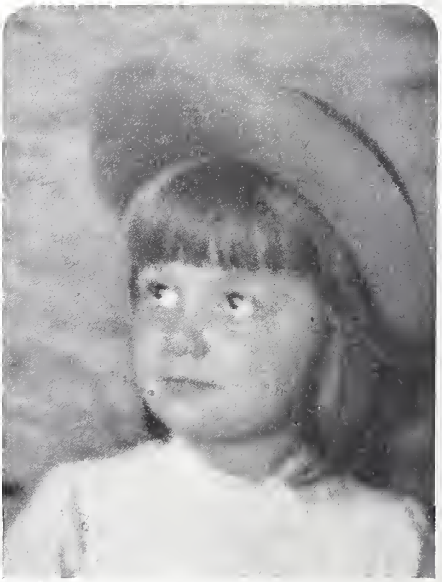


FIG. 3

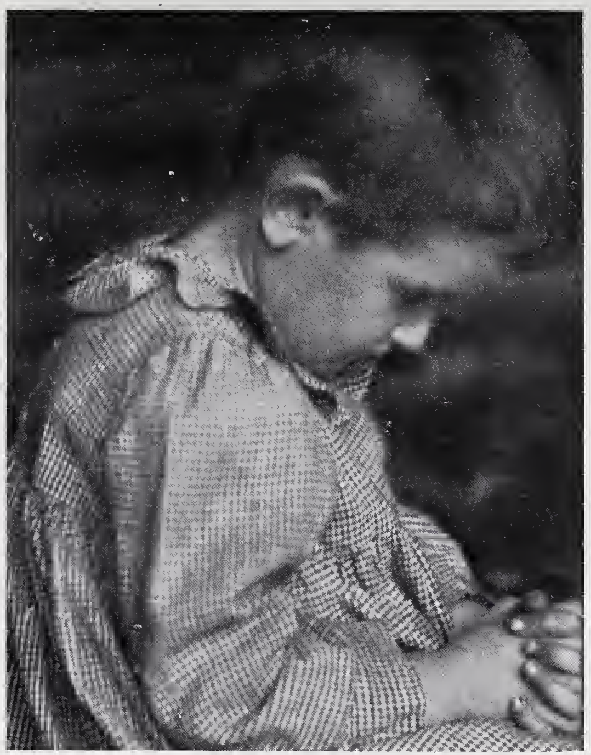


FIG. 2.

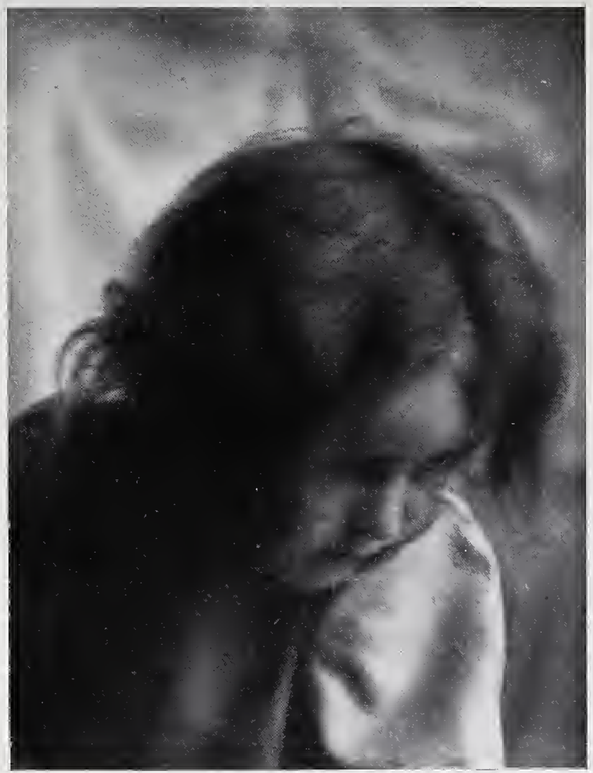


FIG. 5.

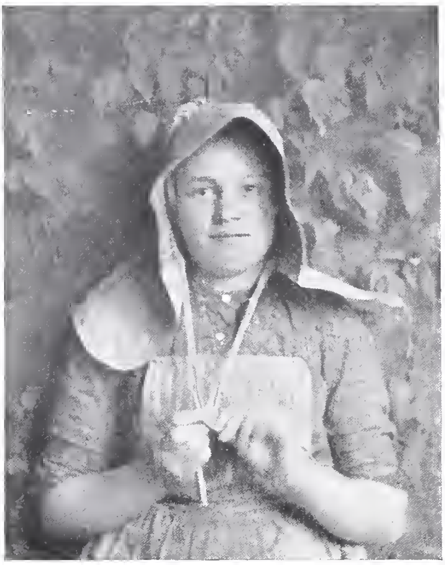


FIG. 4.

an old gray window shade is spotted irregularly with lampblack by aid of a cork (see Fig. 3). Another pretty background can be made by taking a few leaves from the garden and hanging them over a dark background, thereby combining the appearance of nature with the well-measured light of the studio (see Fig. 4). Soft and pleasing effects are procured by pinning white cheese-cloth in irregular folds to a white background, as shown in Fig. 5. However, a great many subjects fare better with plain backgrounds, which detract less from the main figure in the picture. The less unnecessary details, the less crowding of the picture, the simpler the grouping, the plainer the dress of the figure, the greater and the more artistic will be the effect. In posing, stiffness and forced expressions are strenuously to be avoided. While the sitter is placed at ease by a conversation on remote things, a natural and unconventional expression will soon result; I then expose at once and make it a point not to look at the sitter while exposing; the expression will thus be more natural and easy. Children especially should be put at ease and made to forget all about picture-taking. It is well to fasten their attention, but surely not by startling noises or sudden musical notes, otherwise an expression of fright or half stupid surprise will be the result.

One word about retouching. I never have retouched a picture, except in cases where it appeared necessary to remove a few blotches or moles from the face, or to correct accidental blemishes, everything else I believe in leaving as it is. For how easily is the character of a face or the truth of a picture changed by too much or by improper retouching.

DR. F. DETLEFSEN.

SQUEEGEEING PRINTS.

To the average amateur, squeegeeing prints on a ferrotype plate is a source of endless trouble and vexation, and I had my full share of it until I used formalin.

I tried all kinds of coatings, but find that the very simplest way is the best.

After my prints are fixed, I wash them through two or three changes of

Negative by F. C. Baker, Cleveland, Ohio.

SPRINGTIME.

water, and then allow them to stand from ten to twenty minutes in a bath composed of formalin (forty per cent strong) one pint, water four parts, then take them out and finish washing as usual.

When ready to put on the ferrotype, I take the plates and with my hand only, wash them thoroughly in clean cold water, being careful to get them *clean,* and if you take good care of your plates it will not be a hard matter. Then while the plates are still wet take the prints from the bath and squeegee them evenly on the plate. Dry as rapidly or slowly as you please and if your

Negative by H. D. Oberholzer, Chicago.

TURKEYS.

(THIRD PRIZE.)

Negative by H. D Oberholzer, Chicago.

KITTENS.

plates have not been misused the prints will come off nicely every time.

I have a few plates that I have scratched and otherwise maltreated, and they give me some trouble but not often. I procured some new ones and in their six months' use I have not had a print stick.

The formalin bath may be used over and over, as it seems to retain its strength indefinitely, but be sure and wash the prints a few times after fixing and before using the formalin, or they will discolor the bath and it will soon be unfit for use.

I also use the formalin bath on all my negatives, directly after fixing, and am never bothered with frilling or melting of the film. I use same strength as with prints.

A negative may be dried very rapidly without the slightest injury after a formalin bath. I have dried them over a hot stove in less than five minutes.

Formalin is usually sold as a forty per cent solution and will cost about 40 cents per pint.

If your readers will give this simple method a fair trial they will be satisfied with the results.

Grant H. Otis.

HOW TO PRESERVE AND INDEX NEGATIVES.

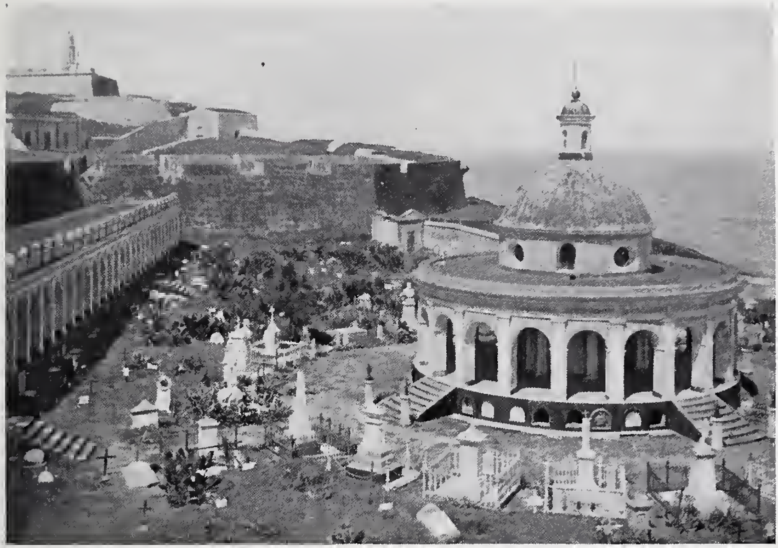
Next to the pleasure of possessing a collection of interesting negatives is the satisfaction of being able to find at once any particular negative desired without that tedious search that is usually necessary when they are laid away in any old place without regard to system or order.

A simple and convenient method of bringing about this desirable state of affairs is to place each negative, as soon as dry, in an envelope (negative preservers they are called by the stock houses), on the outside of which should be written the accession number of the negative, title, date, kind of plate used, size of stop, time of exposure, and any atmospheric or other conditions that may have had any influence on the resulting negative. The number and title are all that have to do with the index, but the other notes will be found useful for reference. The title should be as simple as possible and at the same time give a clear idea of what the negative represents. When these details have been attended to the negative should be filed away in a storage box, where it should always be kept when not in use. Old plate boxes can be used as storage boxes. The envelopes should just fit inside and twelve negatives will just fill the box full enough so that if one is unfortunate enough to have to move they may be handled pretty roughly without danger of scratching and breakage. These boxes should be lettered or numbered in the order in which they are filled, and when a negative is placed in a storage box the box letter or number should be added to the inscription already on the envelope, but so as to be entirely distinct from the negative number previously given it. Something like this:

Neg. No. 142, Box No. 12.

signifying that the negative number is 142 and that its proper place is in storage box No. 12.

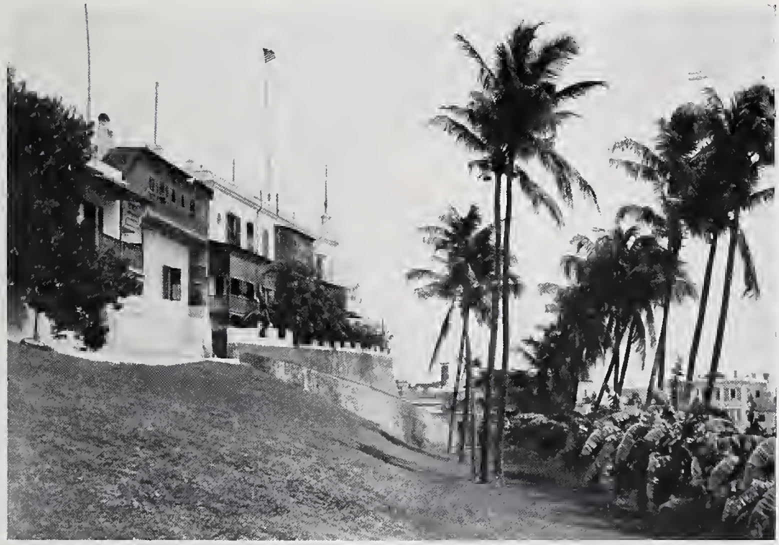
Now that the negatives are all numbered and safely stored away, make a card index of them. The card index is superior to any kind of a book index in that if properly kept it is always complete and always in alphabetical order, while at the same time additions can be made to it as fast as the number of negatives increases. For the index will be needed some regular index cards that can be purchased at most all stationers, and the size nearest that of a postal card will be convenient size to use. More cards will be needed than there are negatives, as each negative is likely to appear on two or more cards. With portrait negatives it is usually sufficient to index under the name of the subject, but with landscapes, buildings, street scenes, etc., it is best to index under the locality where the exposure was made and also under all words in the title that might be looked for in searching for that particular negative. To explain the manner of



Negative by Lieut.-Col. Russell B. Harrison.

A QUIET ENCAMPMENT.

Under the big guns of Morro Castle, San Juan.



Negative by Lieut.-Col. Russell B. Harrison.

CASA BLANCA (WHITE HOUSE), SAN JUAN.

The oldest building on the American Continent. Built in 1514.

making out the cards an example may be useful. Taking an envelope, for instance, with the following inscription:

Neg. No. 142: Box No. 12.
Danvers. Sept. 18, 1898.
Fern-croft Inn.

If there is already a "Danvers" card in the index the addition

Fern-croft Inn; 142: 12

should be made to it, showing that the negative being indexed is number 142, and will be found in storage box number 12. If there is no "Danvers" card one must be made as follows, making the entry on the top line of the card, so as to leave room to add the other Danvers titles:

Danvers, Fern-croft Inn; 142: 12.

and inserted in its proper alphabetical place in the index. Next make out a card:

Fern-croft Inn, Danvers; 142; 12.

and put that in its proper place. If there is a card for "Inns" add to it:

Fern-croft, Danvers; 142: 12

and if not make a new one in the same manner as the "Danvers" card was made and when you get another "Inn" negative it will be added to that card. Now if one was looking for that negative and look for "Danvers," "Fern-croft" or "Inn," it would be found in either case that the negative was number 142 and was stored in box number 12. This system also brings together on one card all the titles of negatives from one locality and also all the different negatives of inns, bridges, city halls, libraries, etc., that one may possess.

The cards should be kept standing on edge in alphabetical order in a box or drawer fitted to them so that they may be conveniently run over with the fingers and any card desired almost instantly found, or the place for a new one determined.

When a new negative is made write the envelope for it at once, and put on the number of the storage box it is to occupy. Then make out the cards and put them in proper places in the index. After using a negative at any time always see that it is immediately returned to its proper envelope and storage box, and the ease and dispatch with which any desired negative can be found will more than repay one for the time that has been expended in arranging the negatives and cards according to this system.

Linwood M. Tillinghast.

A SIMPLY CONSTRUCTED COPYING STAND.

My first copying was done by taking a leaf from the dining-room table and using it as a baseboard, placing the camera on books or a box and supporting the subject by similar means. Naturally my first attempt resulted in distortion of the subject.

It is apparent that such a plan requires a great deal of care and attention to obtain even fair results. As I wished a stand that would do for enlarging with also, I made the following apparatus and it may be a suggestion to those amateurs who wish to do copying and enlarging, and yet will do so little that they do not want to spend much money on apparatus. It is very simply made and costs but a trifle.

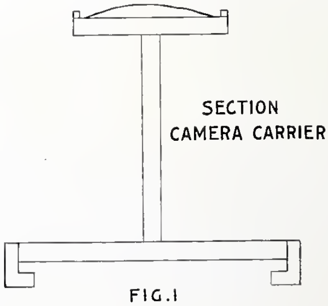


FIG. 1

A baseboard is needed and may be of size to suit the user; mine is 4 feet 8 inches by 10½ by 1 inch; strips will be needed on one side for it to rest on and enable free motion for the carriers in sliding to and fro. A carrier is needed for the camera as in Fig. 1, made to slide on the board. It should be high enough so that when the camera is on it the lens points to the center of the board on the easel. The top is made so that the camera fits between strips on front and sides. The carrier in Fig. 2 is for the subjects to be copied; it will serve as an easel for tintypes and other small subjects. It is well, however, to have a board, made in drawing-board style, to fit on the carrier; mine is 18 inches square by ½ inch thick. The board with carriers and camera will appear as in Fig. 3. It will be readily seen that it can be placed at any angle, and be carried outside or used in the house. It is best, however, to use it in one place and get used to the conditions of light at different times. It is handy where space is very much limited, as it can be turned upside down and suspended from the ceiling. That way is convenient for enlarging, as it can be at an angle and pointed to the sky. For enlarging I have room to place it on a table against the window,

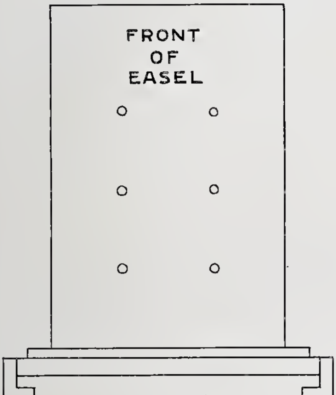


FIG. 2

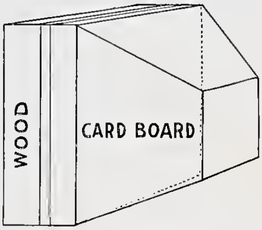


FIG. 4

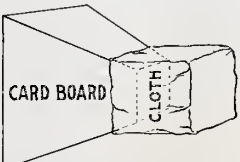


FIG. 5

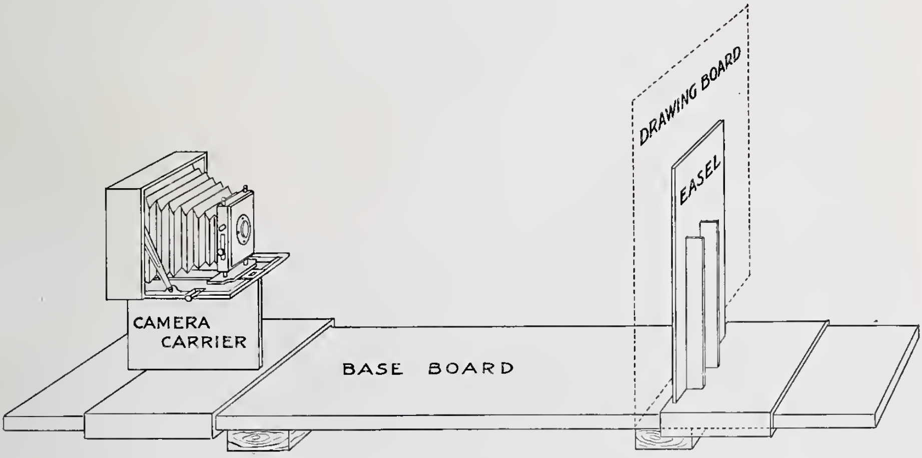


FIG. 3.

but put the carrier on to the board the opposite way around, with the front of the lens pointing to the window. The window is blocked by two plain wooden frames covered with ordinary heavy floor paper, the lower frame being arranged with strips to carry small frame and hood carrying negative as in Fig. 4 Another hood with opaque cloth, Fig. 5, at its end fits on to the lens, being attached by a rubber band, and the hoods fit into each other; the bromide paper is fastened to board on carrier (see Fig. 6).

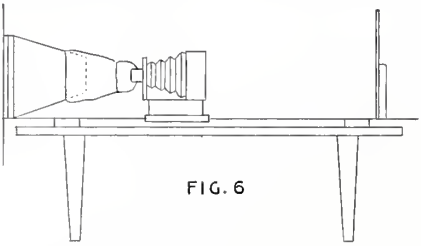


FIG. 6

A device for holding lantern plates for reduction or enlargement is shown in Figs. 7 and 8. It slides on to the carrier in grooves shown, giving it a side motion, and the small block can be arranged to slide vertically, giving both motions, enabling one to secure any one part of the negative. If, however, the camera has a sliding front the vertical motion will not be necessary.

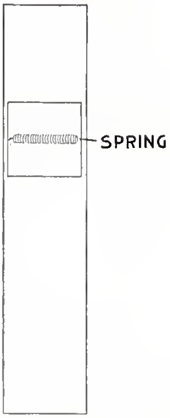


FIG. 7

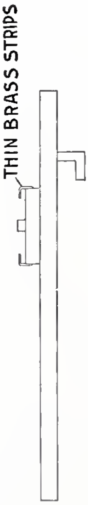


FIG. 8

I have given no dimensions, as they can be according to material on hand. My baseboard cost 15 cents and drawing-board 25 cents. That was all my outlay, nails, screws, pieces of thin sheet brass and spring brass being on hand, also odd pieces of board.

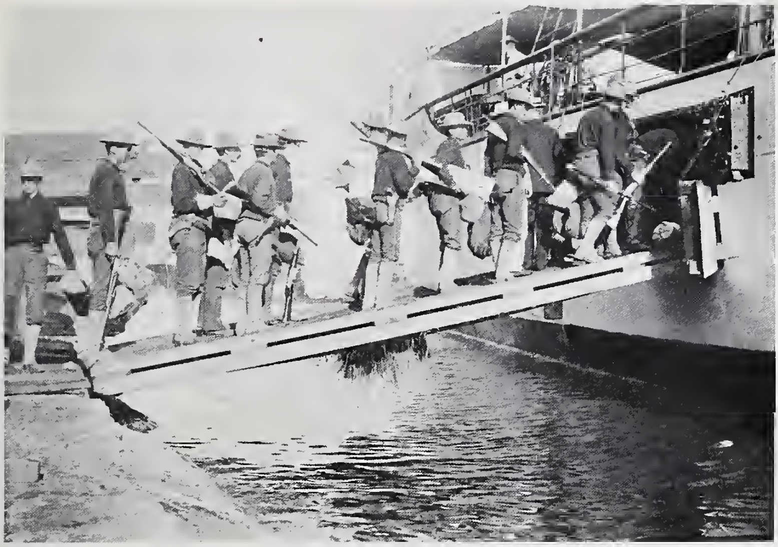
A carpenter would charge very little to make the apparatus complete.

J. Ernest Hounsom.

COMPOSITE LANDSCAPE PHOTOGRAPHY.

In connection with the very able paper by John A. Hodges in the October Photo-Beacon, on "The Foreground and Its Treatment," there appeared three little pictures which very convincingly illustrated the point he made in his article, which was the importance of introducing in the foreground of a pictorial photograph some object or matter which shall not only add interest to the picture, but also act as an aid in leading the eye to the principal object of the composition. In the case of the pictures in question the improvement was secured by the introduction (through a change in the point of view) of a water-filled ditch in the foreground, and this addition resulted in making a charming little picture of what was from another point rather uninteresting in spite of a fine group of trees in the distance. Now to my mind all this suggests another method, one of the advantages of which is that the foreground of your picture may be in fact miles away from the scene which is to serve as the more distant portion—your "ditch" may be in another county from your "motif."

Suppose, for example, our good friend Hodges had found no ditch, that he had plodded around that fascinating group of trees until the circle was complete, and that from every point of view the same bare, uninteresting foreground had confronted him; or even suppose that "continuous rain" had not fallen and the ditch when found had been dry. What would Hodges have done? He might have packed up his



Negative by Lieut.-Col. Russell B. Harrison.

TROOPS LOADING ON TRANSPORT, SAN JUAN, FOR SERVICE IN CHINA.

Negative by G. K. Merrill, Rockland, Me.

traps and gone home, with a sigh of regret that the trees he wished to portray should have been placed among such unworthy surroundings, or he might have exposed a plate on them despite the monotonous, bare foreground.

In the latter event I am sure he would never have been satisfied with the resulting picture.

But is there not a third alternative in a case of this kind? I think there is, and do not see that where the object in view is a "picture," rather than a topographical photograph, there can be any valid objection to it. The thing to do, it seems to me, is this — photograph the scene, selecting the point of view from which the distance seems most pleasing, and if from this point the foreground is not all that it should be, *n'importe,* "don't you care." When this plate is developed you will have a negative that will give a good, probably the best, rendering of the distant portion of the view. The next step is to secure somewhere another negative that shall contain a foreground pleasing in itself and suitable for combination with the distance of the first view. This is by no means easy (I have spent days hunting for nothing other than good foregrounds), but it is lots easier than finding a view in which foreground, middle distance and distance are all three satisfactory. Having secured these two negatives all that is necessary is to make a print from them by the more or less well-known process of double printing. This in many cases will be found to be quite simple, while with other negatives one's ingenuity and skill will be severely taxed; in any case, however, the superiority of the results obtained will amply repay one for the extra time and work expended.

In printing by this method I have never used anything but an ordinary 5 by 7 printing-frame and the same sized plates, but a specially made, larger frame arranged for use with plates of different sizes would doubtless be more convenient, since it is sometimes necessary to print with your paper partly off the negative, as, for example, when you wish to use a portion of a negative and not have it in a corresponding position in your print. I believe there is now such a frame on the market. Hitherto I have overcome this difficulty by printing without the use of a frame at all, simply laying paper and negative on a smooth surface in such a way that both may be picked up together for examination.

Perhaps the greatest difficulty met with in double printing is the combining of the two different parts of the print so that the line where they join shall not be apparent in the finished work. This is best overcome by doing your printing in the shade and by placing the covering used to shut off the light from the part of the paper not being printed, at a slight distance, say one-eighth inch from the glass side of the negative.

Then if the printing of the second negative is carried to such a depth as to match pretty closely the color of the first, it will be found that the two images have blended into each other in such a way as to show no evidences of manipulation. Ordinarily the joint will be along a line running lengthwise of the plate, in which case plain cards with straight edges may be used as blocking-out covers, and these may be fashioned by means of thumb tacks to the face of the printing-frame in the proper position.

Of course some cases will present more difficulty, but you can cut your cover cards to any shape desired, the general rule to follow being that all of the paper that was covered in the first printing should be uncovered in the second and vice versa. The print accompanying this article shows a somewhat complicated example, being made from parts of four different negatives, one for the sky, one for distance, one for the foreground and one for the sheep. Printing-out paper will, of course, be the least troublesome kind to use, though a practiced user of platinum could doubtless get satisfactory results. Probably the best way, however, is to use glossy printing-out paper for the multiple printing, and after securing just the effect desired, copy the

Negative by F. C. Baker, Cleveland, Ohio.

COMPOSITION PICTURE, MADE FROM FOUR SEPARATE NEGATIVES.

print carefully, thus making a new negative from which any number of additional prints may be made at one printing and on any kind of paper.

F. C. Baker.

A CURIOUS FLASH-POWDER.

Nearly everybody nowadays knows how flash-powders are constructed, or, at least, they know what materials enter into their composition, and that powdered metallic magnesium and aluminum are both mixed with varying quantities of chlorates, nitrates, picrates, permanganates, pyrochromates or some other powerfully explosive substances which, under certain conditions, serve to render the powdered metals incandescent.

The presence of these explosives is a serious menace to the safety of the operator and his property, and the insurance companies object in a most emphatic manner to placing insurance on places in which flash-powders are manufactured, handled or stored, while Uncle Sam bars them from the mails, and the express companies look at them and say "*Aber nitt.*"

The danger does not lie in the ignitability of the powders alone, for in that respect gun-cotton is at least as formidable, yet the latter is not particularly frowned on by the insurance companies, but it lies in the fact that the active ingredients in flash-powder can be and very frequently are exploded by friction or by percussion and that the mere removal of the wooden cap of a flash-light cartridge has been known to explode it violently. I know a young man in St. Louis who was examining a flash-cartridge one day. Suddenly, without any warning, one of his fingers went up through the ceiling. Nobody knows just how the cartridge came to go off, but anybody can see the place where the finger used to be and also the spot on the wall where it hit. You can find out about it by going into the Simmond's Hardware Company store in St. Louis, that is where it happened.

The curious thing about a new flash-powder that has just been brought out in Chicago is the fact that none of its ingredients singly, nor all of them together, can be exploded by either friction or percussion. This powder ("Bright No. 9" is the name) needs to be ignited by some sort of a fuse or an electric spark or it can not be exploded; but when it *is* properly ignited it gives a burst of brilliant light that contains a preponderance of the highly actinic violet rays, and does it almost noiselessly and with only a trifling volume of smoke.

Even if Professor Pfabe, the Tolidol inventor, was not a warm personal friend of mine, I would feel that it was my duty to let the photographic public know about "Bright No. 9," his latest invention, for by its use they will be enabled to make flash-light photographs *ad infinitum* without danger of dodging into infinity, unwarned.

This powder is certainly curious. Pfabe said to me: "Why, I grind it up in a mortar — there is no danger at all." "Isn't there?" said I, "you just grind up some of it and I will watch you through the open window," and then he ground some of it while I stood outside in the street all ready to ring up an ambulance. I did not need to ring, but I had an idea that perhaps he was "stringing" me and grinding something else, so I made him light some of it. It was all right. It was fine, the best that I ever saw, and there he was actually grinding it up and banging it around in a mortar like so much table salt.

I would not mind telling you all how this powder is made, and what it is made out of, but that is Pfabe's secret, and he will not divulge it except negatively, meaning thereby, that while he does not say what materials he uses in it, he is quite willing to tell what the things are that he omits.

One thing noticeable about the new powder is that the smoke is almost odorless, what little odor it has being agreeable rather than offensive, as, by Pfabe's account, the only gas liberated in any considerable quantity is oxygen, and oxygen, besides being odorless, is both wholesome and exhilarating.

Here then you have a powder from which the ordinary elements of danger are entirely absent; and it is brilliant, noiseless, smokeless (comparatively), odorless and cheap. If this is not a curious combination, then I do not know one when I see it.

I. N. Cognari.

A FEW ESSENTIALS FOR SUCCESS IN PHOTOGRAPHY.

If you want to be well informed and well posted read everything written pertaining to your vocation. Leisure hours are worth their weight in gold. They should be employed in practicing.

To keep your health good, see that your darkroom is well ventilated.

Rather overexpose than under, as good time on the plate and a weak developer is much better than the reverse. Keep your hands clean; dirty hands are a constant source of trouble, and they spoil everything they come in contact with. I have known the work of four printers for a bright day to be spoiled in an instant by dirty fingers being placed in the water when the prints were washing. When fixing your prints immerse them quickly in the solution so that the action may be equal all over. Never use a fixing solution twice, as it is dirty.

Take good care of your apparatus. Use only the best of chemicals; they are surely the cheapest, as there is nothing cheap in photography that is serviceable. Keep a sponge handy for wiping up splashing and use it for nothing else. Beware of dust in the darkroom. Do not sweep it out, but wipe it out. When you spill hypo on the floor wipe it up, as it will rise up in dust when it is dry and cause trouble which you may not be able to trace. The developer should be applied with a full sweep and never try to force development if you wish soft effects. Carefully dust off your negatives when printing; it will save you a good deal of spotting out. Remember that the future of photography is brighter now than it ever was before. Study to attain pictorial effects in your work.

P. S.—Read "Artistic Photography," by John Hodges, and you will surely succeed. Always bear in mind that cleanliness plays a very important part in photography.

Wm. E. Brown.

EDITORIAL TABLE.

The publishers of the *Photographic Times* announce that in future the journal will be reduced to standard magazine size and the price from $4 to $2 per annum.

The November number of Ralph J. Golsen's trade journal, *The Photo-Pivot,* is devoted entirely to information about lenses. A copy can be had free for the asking. Address 80 and 82 Wabash avenue, Chicago.

The International Annual of Anthony's *Photographic Bulletin* is now ready and will as usual find a steady sale. It is on the lines of past years, being practical in its teachings and plentifully embellished with pictures of all schools of pictorial art.

In a recent issue we said a few words in favor of "Down South" by Rudolf Eickemeyer, Jr., advance sheets having been kindly sent us by the publisher, R. H. Russell, 3 West Twenty-ninth street, New York. The finished book is now before us and we can only repeat what we said before, and to further compliment the publisher on the handsome get-up of the book, which we feel sure will meet a warm welcome from book-lovers in all parts of the country.

From the same publisher comes "In and Out of the Nursery," by Eva Eickemeyer Rowland, pictured by Rudolf Eickemeyer, Jr., which will bring delight both to the young folks and the old.

From far-away Christchurch, New Zealand, comes a copy of "New Zealand Illustrated," the Christmas number of the *Weekly Press.* It consists of forty-eight pages 12 by 19 in size, containing 180 photographs illustrating the scenery and the life of that colony, and it must be said they are exceedingly interesting. The cover is a handsome lithographic reproduction in colors of Maori woman and child, and there is a large supplement of the same character. The publishers inform us that the whole of the process work, the printing and lithographic work was done in the office and by their own staff. It can not be gainsaid that the issue is a highly creditable one to the firm, but when we consider the size of the colony and its remoteness, the result is remarkable.

FROM Tennant & Ward, 289 Fourth avenue, New York, the American agents, we are in receipt of a copy of "Penrose's Pictorial Annual, the process year-book for 1900," and no publication that comes to our office has a warmer welcome, because it is one of the finest specimens of the printers' art we know, and since it prints half-tone engravings from blocks made in every civilized country under the sun, it shows in a nutshell the world's advance in all kinds of process work. It has many reproductions in colors and is well worth the dollar and a half at which it sells.

PHOTOGRAMS of 1900 is to hand, and those who wish to possess this number of the series should send in the price at once. We take orders. Price in paper covers, $1; cloth, $1.50. The volume is very much increased in size, is on finer paper and beautifully printed. It is representative of the best work done in the world and no one who takes interest in pictorial photography can afford to be without it. The article on "The American School," by Joseph T. Keiley, will be found amusing reading. Just fancy trying to jolt over this kind of thing: "Against the sorts of criticism that find their inspiration either in editorial garrulity or the desire to acquire notoriety and advertisement, even at the expense of becoming editorial gargoyles whose sole purpose is to collect and belch forth from ever open throats the muddy drainage of petty envy, vindictiveness and anonymous scurrility, no shield is needed." Now, wouldn't that jar any plain, ordinary individual, such as the average run of editors is made of? And yet there are hundreds of similar samples in the course of the article — all equally incomprehensible. Mr. Keiley has not yet learned that such verbal conglomerations and polysyllabic combinations are the very earmarks of a hazy, indefinite thinker, and that the man who thinks clearly can always express himself in words of one and two syllables. His own efforts at picture-making are just as indefinite, hence all this tempest in a teapot. He complains that we attributed to him statements and views that he never expressed. Possibly we did; if so, it was unintentional, but what plain, ordinary individual can avoid making mistakes if he tries to locate the bones in a jellyfish, especially if he has been assured that bones are certainly present. There is one comfort. Mr. Keiley will find his true level in ordinary course, just as poor editors find theirs. In the meantime, one of the latter vaguely wonders if the former's article would have been written differently if it had been started after the outbreak of the sinners' revolt that began a few weeks ago in the New York Camera Club and the Philadelphia Photographic Society. But the book is good, and the readers of this journal should each secure a copy.

THE Manhattan Optical Company, Cresskill, New Jersey, has taken time by the forelock and has issued a catalogue of its 1901 cameras. Copies free for the asking.

THE latest issue of the *Photo-Miniature* is devoted to trimming, mounting and framing. It is very practical. Price, 25 cents. Published by Tennant & Ward, 289 Fourth avenue, New York.

FROM Lieut.-Col. Russell B. Harrison we have received a number of very interesting pictures of objects of interest in the vicinity of San Juan, and we have reproduced three of them, believing our readers will be as glad as we are to see what things are like in part of Uncle Sam's new possessions.

THE PHOTO-BEACON.

AN ILLUSTRATED PHOTOGRAPHIC JOURNAL,
Published Monthly.

Yearly subscription, $1.00, in advance; single copies, 10 cents.

All remittances should be sent by postoffice money order, draft or registered letter to the order of THE PHOTO-BEACON COMPANY.

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